CONSTRUCTION NEWS

Some of the Week's Large Projects

AMONG the announcements for the current week are the following:

Proposed Work

Plant, Long Beach, Calif., Southern Calif. Edison Co., plans, $60,000,000.

Mill, Dalhousire, N. B., Canadian International Paper Co., Three Rivers, Que., having preliminary plans prepared, $10,000,000.

Hotel, Toronto, Ont., G. Wright and E. M. Carroll, having plans prepared, $5,000,000.

Office and store, Chicago, Ill., Pancoe Bros., having plans prepared, $3,500,000.

Power house, Toronto, Ont., Can. Pac. R.R., plans, $3,000,000.

Office and store, Chicago, Ill., Madison-Clark Bldg. Corp., having plans prepared, $2,700,000.

Hotel, Newark, N. J., Hotel Pennsylvania, having plans prepared, $2,500,000.

Sewage disposal plant, Toledo, O., plans, $2,500,000.

Sugar refinery, Seattle, Wash., Chamber of Commerce, plans, $2,000,000.

Paper mill, Grand Mere, Que., Laurentide Co., Ltd., preparing plans, $2,000,000.

Apartment, Chicago, Ill., A. Kruggel & Co., having plans prepared, $1,500,000.

Hospital, Newton, Mass., Newton Hospital, having plans prepared, $1,500,000.

Commercial building, St. Louis, Mo., Dean Glass Co., preparing preliminary plans, $1,400,000.

Highway, three counties in California, plan, $1,004,000.

Newsprint Mill, Cochrane, Ont., Abitibi Power & Paper Co., Iroquois Falls, having plans prepared, $1,000,000..

Labor Temple, Chicago, Ill., Amalgamated Clothing Workers of America, having plans prepared, $1,000,000.

Memorial, etc., Des Moines, Ia., American Legion Committee, plans, $1,000,000.

Office building, Philadelphia, Pa., N. W. Ayres & Son, having plans prepared, $1,000,000.

Steel plant, Sand Springs, Okla., A. G. Herrgene, plans, $1,000,000.

Highway, Tri-county, California; bond election planned, $1,200,000.

Bids Desired

Bank and office building, Philadelphia, Pa., Fidelity Bldg., Corp., Jan. 10, $10,000,000.

Department store, Newark, N. J., L. Bamberger & Co., Jan. 3, $10,000,000.

Seawall, Bay St. Louis, Miss., Road Protection Comn., Jan. 4, $1,250,000.

High School, Indianapolis, Ind., School Comn. Jan. 21, $1,200,000.

Hotel, Chicago, Ill., Royal Blue Hotel, Jan. 5, $1,100,000.

Contracts

Central Highway, Cuba, Spec. Bd. of Award., Cuban Govt., recommend contract be awarded to Warren Bros., Boston, Mass., $75,896,653.

Office building, Cincinnati, O., Eureka Fire Insurance Co., awarded to Foreman & Putnam, Marietta, $2,000,000.

Classified Index of Bids Wanted

Waterworks

Bids close — *See Eng. News-Record*

Jan. 4 Olney, Ill. ..... Dec. 9
Jan. 4 Menasha, Wis. ..... Dec. 23
Jan. 4 Minneapolis, Minn. ..... Dec. 30
Jan. 4 Amarillo, Tex. ..... Dec. 30
Jan. 4 St. Paul, Minn. ..... Dec. 30
Jan. 5 Baltimore, Md. ..... Dec. 30
Jan. 6 Bellingham, Wash. ..... Dec. 30
Jan. 6 Eldorado, Kan. ..... Dec. 16
Jan. 7 Conneaut Lake, Pa. ..... Dec. 23
Adv. Dec. 16 to 30.
Jan. 10 Washburn, Ill. ..... Dec. 23
Jan. 11 Macon, Ga. ..... Dec. 16
Jan. 11 Tallahassee, Fla. ..... Dec. 23
Adv. Dec. 23 and 30.
Jan. 11 Farmerville, La. ..... Dec. 30
Jan. 12 Henderson, N. C. ..... Dec. 23

Sewers

Jan. 4 Seminole, Okla. ..... Dec. 23
Jan. 4 Ruston, La. ..... Dec. 30
Jan. 5 Neptune City (mail Avon by the Sea), N. J. ..... Dec. 23
Jan. 5 Orlando, Fla. ..... Dec. 23
Jan. 6 Cleveland, O. ..... Dec. 16
Jan. 6 Des Moines, Ia. ..... Dec. 30
Jan. 7 Pontiac, Mich. ..... Dec. 23
Adv. Dec. 23 and 30.
Jan. 7 Tulsa, Okla. ..... Dec. 30
Jan. 10 Hamilton, Ont. ..... Dec. 30
Jan. 13 Paducah, Ky. ..... Dec. 30
Adv. Dec. 30.
Jan. 13 Akron, O. ..... Dec. 30
Jan. 18 St. Louis, Mo. ..... Dec. 23
Jan. 20 Chicago, Ill. ..... Dec. 23
Jan. 20 Blacksburg, Va. ..... Dec. 30
Adv. Dec. 30.
Jan. 25 Rice Lake, Wis. ..... Dec. 30

Waste Disposal

Jan. 5 Jacksonville, Fla. ..... Dec. 30

Bridges

Jan. 3 Phila., Pa. ..... Dec. 30
Jan. 4 Boston, Mass. ..... Dec. 16
Jan. 4 Wichita, Kan. ..... Dec. 30
Jan. 5 Stone Cliff, W. Va. ..... Dec. 9
Adv. Dec. 9 to 30.
Jan. 5 Wichita, Kan. ..... Dec. 23
Jan. 5 Florida ..... Dec. 23
Jan. 10 Bridgeport, Conn. ..... Dec. 23
Jan. 20 Fairfield, Ill. ..... Dec. 30

Excavation, Drainage, Irrigation, Levees, River and Harbor

Bids close — *See Eng. News-Record*

Jan. 3 Quincy, Ill. ..... Dec. 30
Jan. 3 Carthage, Ill. ..... Dec. 30
Jan. 4 Bay St. Louis, Miss. ..... Dec. 30
Jan. 4 Scranton, S. C. ..... Dec. 30
Jan. 5 La Mesa, Calif. ..... Dec. 23
Jan. 8 Gothenburg, Neb. ..... Dec. 16
Jan. 10 Iowa ..... Dec. 16
Jan. 12 Brownsville, Tex. ..... Dec. 30
Feb. 2 Duluth, Minn. ..... Dec. 30

Streets and Roads

Jan. 3 Marion, O. ..... Dec. 30
Jan. 3 Vicksburg, Miss. ..... Dec. 30
Jan. 3 Seminole, Okla. ..... Dec. 30
Jan. 4 Iowa City, Ia. ..... Dec. 30
Jan. 4 Columbus, O. ..... Dec. 30
Jan. 4 Lyons, Neb. ..... Dec. 30
Jan. 5 Wichita, Kan. ..... Dec. 23
Jan. 5 Florida ..... Dec. 23
Jan. 6 Dillon, S. C. ..... Dec. 16
Jan. 6 Vero Beach, Fla. ..... Dec. 16
Jan. 7 Kentucky ..... Nov. 11
Jan. 7 Kentucky ..... Dec. 9
Jan. 7 Pennsylvania ..... Dec. 16
Adv. Dec. 16 to 30.
Jan. 7 Pennsylvania ..... Dec. 30
Jan. 10 Sanford, Fla. ..... Dec. 30
Jan. 10 San Diego, Calif. ..... Dec. 30
Jan. 10 Birmingham, Ala. ..... Dec. 16
Jan. 10 New Jersey ..... Dec. 23
Adv. Dec. 23 and 30.
Jan. 10 Evansville, Ind. ..... Dec. 23
Jan. 10 Birmingham, Ala. ..... Dec. 23
Jan. 10 Illinois ..... Dec. 23
Jan. 11 Wellington, Tex. ..... Dec. 23
Jan. 11 Panhandle, Tex. ..... Dec. 30
Jan. 12 Alabama ..... Dec. 23
Jan. 13 Sierra Madre, Calif. ..... Dec. 30
Jan. 14 Idaho ..... Dec. 30
Jan. 14 Sedalia, Mo. ..... Dec. 30
Jan. 25 Birmingham, Ala. ..... Dec. 30
Jan. 25 Marysville, Kan. ..... Dec. 30
Feb. 18 Kentucky ..... Dec. 16

Buildings—Commercial

Dec. 31 Phila., Pa. ..... Dec. 30
Jan. 1 Wash., D. C. ..... Oct. 7
Jan. 3 Newark, N. J. ..... Dec. 30
Jan. 4 Asbury Park, N. J. ..... Dec. 23
Jan. 5 Marksville, La. ..... Dec. 2
Jan. 5 Chicago, Ill. ..... Dec. 30
Jan. 5 Waterloo, Ia. ..... Dec. 30
Jan. 10 Norwood, Mass. ..... Dec. 23

Bids close — *See Eng. News-Record*

Jan. 10 Phila., Pa. ..... Dec. 30
Jan. 10 Norwood, Mass. ..... Dec. 30
Jan. 12 Albany, N. Y. ..... Dec. 9
Jan. 19 Flint, Mich. ..... Dec. 30

Buildings—Industrial

Jan. 1 Salem, O. ..... Sept. 30
Jan. 2 Cleveland, O. ..... Dec. 30
Jan. 3 Phila., Pa. ..... Dec. 30
Jan. 5 Phila., Pa. ..... Dec. 30
Jan. 7 Totawa (mail Paterson), N. J. ..... Dec. 30

Buildings—Educational, Religious

Jan. 1 Wash., D. C. ..... Oct. 7
Jan. 3 L'Anse, Mich. ..... Nov. 11
Jan. 6 Erie, Pa. ..... Dec. 16
Jan. 4 Hartville, Calif. ..... Dec. 30
Jan. 5 Detroit, Mich. ..... Dec. 23
Jan. 7 Detroit, Mich. ..... Dec. 23
Jan. 7 Gretna, La. ..... Dec. 23
Jan. 7 Wash., D. C. ..... Dec. 30
Jan. 10 Taunton, Mass. ..... Dec. 9
Jan. 10 Holyoke, Mass. ..... Dec. 23
Jan. 10 Miami, Fla. ..... Dec. 23
Jan. 15 New Philadelphia, O. ..... Dec. 9
Jan. 17 Tallahassee ..... Dec. 30
Jan. 20 Tupelo, Miss. ..... Dec. 30
Jan. 21 Portsmouth, O. ..... Dec. 30
Jan. 21 Indianapolis, Ind. ..... Dec. 30
Jan. 24 East Grand Rapids (mail Grand Rapids), Mich. ..... Dec. 30
Feb. 1 Wash., D. C. ..... Oct. 7

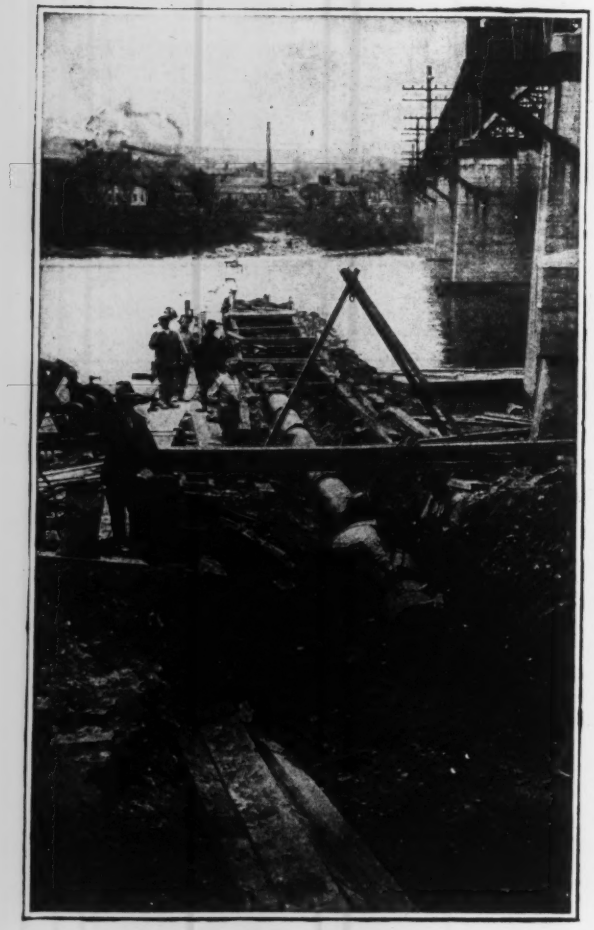
Federal Government Work

Jan. 3 Operating Machinery—Louisville, Ky. ..... Dec. 9
Adv. Dec. 9 to 30.
Jan. 3 Hangars—Fort Sam Houston (Sta. San Antonio), Tex. Dec. 16
Jan. 3 Pumping Units—Washington ..... Dec. 23
Jan. 4 Wharf Repairs—Fort Mason (mail San Francisco), Calif. ..... Dec. 23
Jan. 6 Repairing Walls—San Juan, Porto Rico ..... Dec. 16
Jan. 7 Post Office—Madison, Wis. Dec. 16
Jan. 11 Alterations—New York, N. Y. ..... Dec. 16
Jan. 11 Tank and Tower—Ft. Snelling (br. St. Paul), Minn. ..... Dec. 30
Jan. 12 Roads and Walks—San Diego, Calif. ..... Dec. 16
Jan. 12 Dredge—Wash., D. C. ..... Dec. 16

See proposal advertising on page 113

Constr. News page 411

TRADE "LEADITE" MARK
Registered U. S. Pat. Office



Laying 20-in. c.i. bell and spigot water main across Schuylkill River with LEADITE joints.

Speed— Pipe Laying

Thousands of miles of cast iron water mains have been laid with LEADITE by large cities, towns, villages, railroads, mines, and industrial plants.

These pipe lines are laid under paved streets, under and over bridges, under railroad tracks, across streams, thru open country, in filter galleries—high and low pressures—under all conditions of water works construction.

This is the way some LEADITE users lay pipe:

1710 ft. 6 in. pipe laid in one day.
1665 ft. 6 in. pipe laid in 7½ hrs. with 6 men.
91 lengths 20 in. pipe laid in one day.
15 to 19 lengths 48 in. pipe laid in one day—laid one length in 7 minutes.
3860 ft. 6 in. and 8 in. pipe laid in 9 hrs. with 2 gangs.

You can do this.

The up-to-date water works man specifies and uses LEADITE.

LEADITE saves at least 75%

LEADITE is the pioneer self-caulking Material for c.i. pipe

Be Sure It Is LEADITE and Accept No Imitations

THE LEADITE COMPANY, Inc.
1512 Land Title Building, Philadelphia, Pa., U. S. A.

NO CAULKING

Bids close		See Eng. News-Record
Jan. 14	Extension—Missoula, Mont.	Dec. 2
Jan. 18	Retaining Walls, etc.—Wash., D. C.	Dec. 30
Jan. 19	Building — San Diego, Calif.	Dec. 30
Jan. 19	Pier—Pearl Harbor, T. H.	Dec. 2
Jan. 19	Radio Tower—Jupiter, Fla.	Dec. 16
Jan. 20	Towboat—St. Louis, Mo.	Dec. 9
Jan. 20	Dredge Tender—Norfolk, Va. Adv. Dec. 23 and 30.	Dec. 23
Jan. 20	Dredging—New York, N. Y. Adv. Dec. 23 and 30.	Dec. 23
Feb. 7	Tug—Mobile, Ala. Adv. Dec. 16 to 30.	Dec. 16

Bids close		See Eng. News-Record
Mar. 10	Scout Cruisers, etc.—Wash., D. C. Adv. Dec. 30.	Dec. 30

Unclassified

Jan. 7	Ties—New York, N. Y.	Dec. 30
Jan. 11	Tunnel—Chattanooga, Tenn. Adv. Dec. 30.	Dec. 30
Jan. 19	Elevators—Brooklyn, N. Y. Adv. Dec. 23 and 30.	Dec. 30
Jan. 19	Elevator—Kings Park, N. Y. Adv. Dec. 30.	Dec. 30
Jan. 19	Street Lighting System—Marcy, N. Y.	Dec. 16

Materials

Bids close		See Eng. News-Record
Jan. 3	Switches, Crossings, Frogs, etc. —Phila., Pa.	Dec. 30
Jan. 3	Road Oil—Winona, Minn.	Dec. 30
Jan. 4	Bridge Lumber—Cresco, Ia.	Dec. 30
Jan. 5	Tanks and Pipe—New York, N. Y.	Dec. 30
Jan. 5	Frogs, Rail Braces and Switches—Phila., Pa.	Dec. 30
Jan. 5	Lumber, etc.—Corning, Ia.	Dec. 16
Jan. 6	Copper Wire, etc.—Columbus, O.	Dec. 30

News of the Week

Waterworks

Proposed Work

Mass., Salem—City Council plans repairing and partially reconstructing Folly Hill Reservoir, 135 x 140 ft., concrete, 1 m.g. capacity, in Danvers. Engineer not selected.

N. Y., Akron — Plans election $50,000 bonds, extending waterworks, incl. c.i. pipe line and storage reservoir. J. P. Wells, 80 East Ave., Rochester, engr. Noted Feb. 11.

N. Y., Elmgrove (mail Spencerport)—Plans 9 mi. pipe line, and small concrete storage reservoir. $28,000. T. J. Morrison, Wilder Bldg., Rochester, engr.

N. Y., Jamesville — City Water Comm. making surveys distributing mains and watertanks. $80,000. Adcock & Gibbs, Map Dept., County Clerks Office, engrs.

W. Va., Alderson—Election Jan. 6, $35,000 bonds, filtration plant. C. E. Staton, recdr.

La., Winnfield—Making surveys and election soon $50,000 bonds, waterworks extensions, incl. mains and pumping equipment, etc. C. D. Evans, 414 Levy Bldg., Shreveport, engr.

Mich., Detroit—Dept. Water Supply making plans extending 6- to 16-in. c.i. mains in Outer Dr., Mill Rd. and 4 avenues. G. H. Fenkell, 176 East Jefferson Ave., engr.

Mich., Detroit — Dept. Water Supply, making plans 17,120 ft. 6- to 16-in. c.i. mains in 11 avenues. G. H. Fenkell, 176 East Jefferson Ave., engr.

Ia., Cedar Rapids—Election in spring $350,000 bonds, new waterworks, tower, tank, filtration plant, etc. H. R. Green Eng. Co., Bever Bldg., engrs. Noted Nov. 11.

Ia., Randolph—Making preliminary plans complete waterworks and distribution system, incl. pumping equipment, mains, etc. $22,500. Henningson Eng. Co., Natl. Bldg., Omaha, Neb., engrs.

Kan., Rossville—Election in April $25,000 bonds, waterworks. S. A. Sulentic Consult. Eng. Co., New England Bldg., Topeka, engrs.

Neb., Adams — Election soon $30,000 bonds, waterworks, incl. pump, wells, tank and tower and distribution system. Henningson Eng. Co., Natl. Bank Bldg., Omaha, engrs.

N. D., Hebron—Plans waterworks $20,000. T. R. Atkinson, Bismarck, engr.

Mo., Cabool—Making preliminary plans complete waterworks and distribution system. H. E. McKinney, mayor.

Mo., New Madison—Voted $25,000 bonds, waterworks.

Mo., Owensville—See "Sewers."

Tex., Coolidge — Voted $20,000 bonds, waterworks improvements, etc. Address J. H. Gamel, mayor. Noted Nov. 25.

Tex., Rice—Election probably in April, $30,000 bonds, complete waterworks. Address Mayor. Noted Nov. 4.

Ore., Ashland—Making plans and takes bids about Jan. 1, renovating water system, incl. concrete dam and 2 m.g. tank. F. H. Walker, Ashland, engr.

Calif., Concord — Making preliminary surveys new water system. $150,000. R. L. Calfee, 221 South 22nd St., Richmond, engr.

Calif., El Centro—City plans purchasing 2,496 ft. 8 in. Class "B" bell and spigot c.i. pipe in 16 ft. lengths or equal in centrifugal c.i., and 3,000 ft. above pipe in 6 ft. lengths. J. C. Neale, city clk.

Calif., Exeter—Plans election $50,000 bonds, purchasing pump, water tank and extending mains in various streets.

Calif., Palo Alto—See "Streets and Roads."

Calif., Santa Ana—Santa Ana Cemetery Dist. plans water system for Santa Ana Cemetery. Work will probably be done by district forces under supervision of engineer not yet selected. $15,000.

Calif., Ventura—Defeated $500,000 bonds, improving water system, and $50,000 bonds, improving fire department. Noted Nov. 25.

Bids Desired

Mass., Boston—Dec. 31, by Supply Dept., 500,000 lb. gate and hydrant castings, for Pub. Wks. Dept., Water Serv. H. S. Frost, supt.

Mass., Boston—Dec. 31, by Supply Dept., 400,000 lb. branches, curves, etc. for Pub. Wks. Dept., Water Serv. H. S. Frost, supt.

N. Y., North Syracuse—Takes bids in spring distribution system and steel tank and tower. $150,000. Mitchell & Sarason, Dillage Bldg., Syracuse, engrs.

Md., Baltimore—Jan. 5, by Bd. Awards furnishing c. i. pipe and fittings to Bureau Water Supply. V. B. Siems, City Hall, water engr.

La., Farmerville—Jan. 11, by Mayor and Bd. Aldermen, Town Hall, waterworks improvements, incl. pump house, 125,000 gal. concrete reservoir, 29,530 ft. 2- to 8-in. c.i. pipe, 50,000 gal. steel tank and tower, etc. Swanson-McGraw, Inc., 426 Balter Bldg., New Orleans, engrs. Noted Oct. 21.

Minn., Minneapolis — Jan. 4, by F. S. Gram, city purch. agt., 132 various sized gate valves, and 100 hydrants. N. W. Elsberg, city engr.

Minn., St. Paul—Jan. 4, by A. E. Eggert, city purch. agt., 2,400 sections for stop boxes and 300 sections for gate boxes with c.i. covers, and screws. G. M. Shepard, city engr.

Neb., Lyons—See "Streets and Roads."

THESE reports are grouped under each class (water-works, sewers, etc.) and under each stage of the work (proposed, bids desired, etc.), according to the following geographic sections: New England, Middle Atlantic, South, Middle West, between Mississippi and Rocky Mountains, Far West, and Canada.

Where name of official is not given inquiries should be addressed to City Clerk, County Clerk, or corresponding official.

Tex., Amarillo—Jan. 4, by H. B. Jones, city engr., waterworks improvements, incl. approximately 28,230 ft. 6- to 20-in. diam. c.i. mains, also excavating and backfilling 78,230 ft. trench, for City. $28,000.

Tex., Mart—Taking bids and opens same about Jan. 5, approximately 7,000 ft. 10 in. Class B De Lavaud pipe. $12,000. Address Mayor. Owner will install same by day labor. Noted Dec. 23.

Wash., Bellingham — Jan. 6, by City Council, replacing and repairing 17,000 ft. 4- to 12-in. c.i. mains for Water Dept. $29,000. W. B. Short, Bellingham, engr. Noted Apr. 29.

Calif., Santa Barbara—E. A. Rolison, city engr., taking bids and open same about Jan. 4, gate valves, c.i. pipe, fittings, fire hydrants. To exceed $15,000.

Contracts Awarded

N. J., Highland Park (br. New Brunswick)—Mayor and Boro Council, Masonic Bldg., Raritan and 4th Aves., 16 in. mains under Delaware and Raritan Canal and under Raratan River, etc., to Utility constr. Co., 5 Spring St., New Brunswick, $17,481. Noted Dec. 16.

N. J., Trenton — Bd. Institutions & Agencies, Trenton, watermains, underground steam system, 6 doctors cottages, etc., at State Hospital, to Piper Bros., Broad and Brunswick Sts., $9,800. Noted Dec. 2.

Md., Baltimore—Mayor and City Council, City Hall furnishing and delivering curb stop and roadway valve boxes to Bureau Water Supply, to Central Fdry. Co., Dundalk, $7,990. Noted Dec. 23.

Mich., Detroit—Dept. Water Supply, 176 East Jefferson Ave., 415 tons c.i. pipe fittings, f.o.b. Detroit, to Michigan Valve & Fdry. Co., 2631 Parkinson Ave., at $73.80 per ton, total $29,627.

Mich., Detroit—Dept. Water Supply, to Michigan Valve & Fdry. Co., 3631 Parkinson St., 1911 16 x 24 in. to 24 x 48 in. c.i. bolted sleeves, f.o.b. Detroit, at $79.90 per ton; also 29 x 48 in. flanged special lug pipe at $99.72 each, 29 x 42 in. at $95.08 each, 48 x 54 in. at $163.82, 45 x 48 in. degree curves at $314.67, 42 x 45 in. degree spigot curves at $240.55, and 30 x 42 in. degree curves at $236.40 each.

Mo., St. Louis—Bd. Pub. Serv., 208 City Hall, superstructure high and low pressure engine, boiler and coal receiving houses at Howards Bend Waterworks Sta., on Missouri River, in St. Louis Co., to Dunham Constr. Co., Chemical Bldg., $778,141. Engrs. est. $900,000. Noted Dec. 23.

Tex., Mart—See "Bids Desired."

Okla., Antlers — New filtration plant, pumps and connecting pipe lines, incl. 2,140 ft. 6 and 8 in. c.i. pipe, etc., to E. W. Baker & Co., 408 Medical Arts Bldg., Oklahoma City, $23,000. Engrs. est. $25,000. Noted Nov. 25.

Sewers

Proposed Work

W. Va., Huntington—City Comn. plans sewerage in Walnut Hills-Robey Hollow Dist. $18,000. Barstow & McCurdy, 321 Ohio Bldg., Akron, O., engrs. A. B. Maupin, city engr.

La., Winnfield—Making surveys and election soon $100,000 bonds, complete sewerage system. $100,000. C. D. Evans, 414 Levy Bldg., Shreveport, engr. Noted Dec. 9.

O., Martins Ferry—Plans storm sewers in various streets. $25,000.

O., Toledo—Plans sewage disposal plant. $2,500,000. L. T. Owen, city engr.

Ill., Aurora — Aurora Sanitary Dist. making preliminary plans intercepting sewers and disposal plant. Alvord, Burdick & Howson, 8 South Dearborn St., Chicago, engrs.

Ia., Cedar Rapids—Making plans 5,000 ft. 12 in. tile sewers in various streets. $50,000. H. R. Green Eng. Co., Bever Bldg., engrs.

Mo., Owensville—Election in March, $25,000 bonds, sanitary sewerage system; also $7,000 bonds, 100,000-150,000 gal. concrete reservoir.

Mo., St. Joseph — Making preliminary plans complete sewerage system in Brookdale Dist. $800,000. W. M. Spann, city engr. Leslie Eng. Co., 820½ Felix St., consult. engrs. Noted Dec. 23.

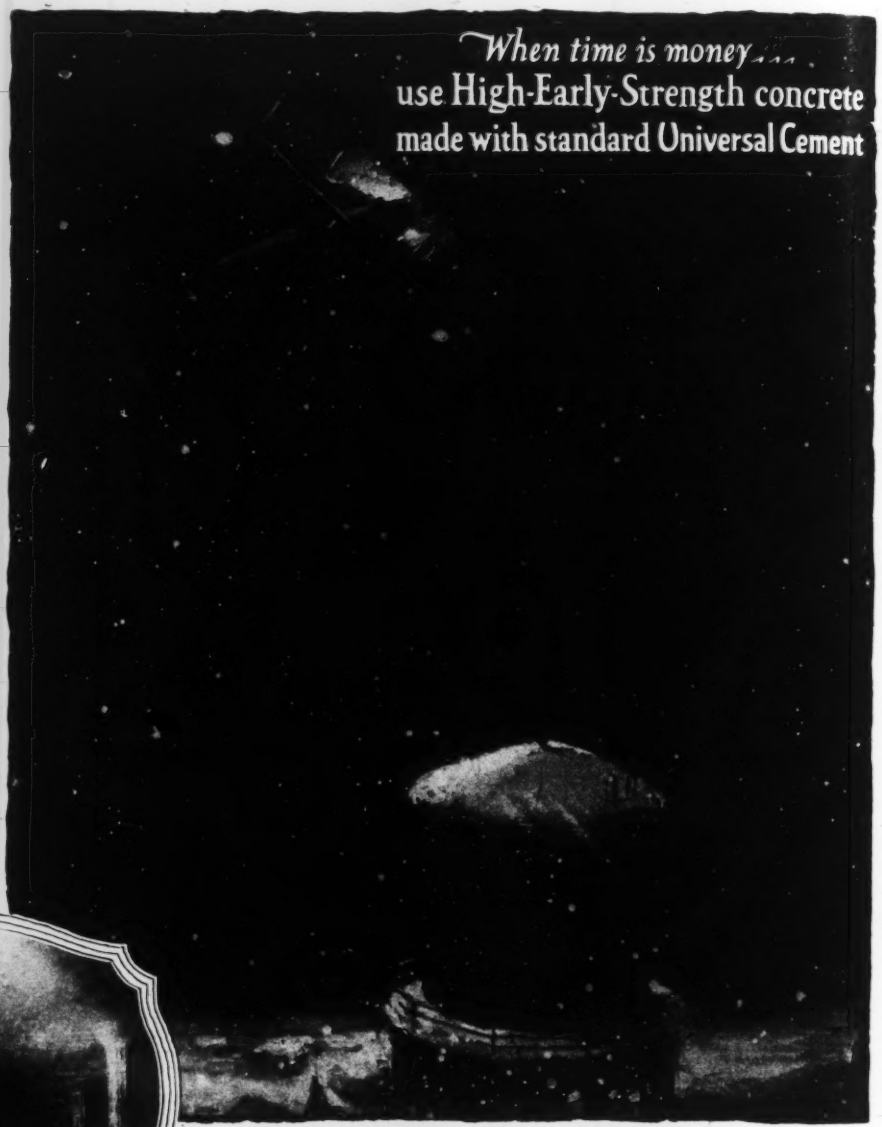
Tex., Coolidge — Voted $40,000 bonds, sewer improvements, disposal plant, etc. Address J. H. Gamel, mayor. Noted Nov. 25.

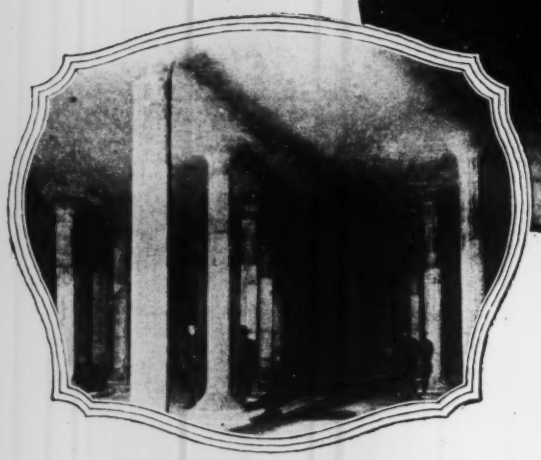
Tex., Denton — Making plans sewer improvements, additional mains, etc. $30,000. H. T. Brewster, city engr.

Tex., Lewisville — Making preliminary plans complete sewerage system. $30,000. F. J. Von Zuben, 611 Dan Waggoner Bldg., Ft. Worth, engr.

Tex., Rice—Election probably in April, $30,000 bonds, complete sewerage system. Address Mayor. Noted Nov. 4.

Constr. News page 412





Water Tank, Boonville, Ind. Cold-weather construction facilitated by High-Early-Strength ***Universal*** concrete. Standard ***Universal*** (not special) cement used by Roth Construction Co., Boonville.

Cold Weather No Obstacle On This Job!

Winter concreting, always practicable, is made more feasible than ever by High-Early-Strength concrete.

In this way, a water tank and pumphouse at Boonville, Ind., was built and placed in service before work ordinarily would have been started.

By keeping aggregates warm and the structure protected, and by using High-Early-Strength *Universal* concrete, the builder shortened the period of protection from freezing, hastened removal of forms and finished the job weeks earlier than is usual.

High-Early-Strength concrete made by using special methods and standard *Universal* (not special) cement furnished at the usual price gives not only speed but also permanently better and stronger concrete. The accompanying coupon will bring full details.

Universal Portland Cement Co.

Chicago Pittsburgh Minneapolis Duluth Cleveland Columbus New York

Concrete for Permanence

UNIVERSAL PORTLAND CEMENT CO.
210 South La Salle Street, Chicago.

Without obligation, please send me detailed information on methods for securing strong Concrete in 3 days with standard *Universal* (not special) cement, the same quality *Universal* regularly used.

Name .....

Address .....

ENR 12-30

Sewers (Continued)

Tex., Sonora—Making preliminary surveys complete sewerage system. Election soon $40,000 bonds for same. Stockton & Moore, c/o Moore Bldg., San Antonio, engrs.

Okla., Tulsa—Made preliminary surveys new sanitary sewers in West Tulsa Addition. $100,000. C. Schultz, City Hall, engr.

Wash., Montesano—Making preliminary survey complete new sewerage system. Barr & Cunningham, Spalding Bldg., Portland, Ore., engrs.

Calif., Gilroy—Voted $120,000 bonds, constructing sewage disposal plant. Noted Nov. 25.

Calif., Los Angeles—Rejected bids 10,865 ft. 6 in. vitr. clay sewer, etc. in Mar Vista Ave. Noted Dec. 16.

Calif., Palo Alto—See "Streets and Roads."

Calif., San Bernardino—Making preliminary plans storm drainage system to carry off flood waters in business section. To exceed $25,000. C. E. Johns, city engr.

Bids Desired

Va., Blacksburg—Jan. 20, at office J. A. Burruss, pres. Virginia Polytechnic Institute, sewage disposal works for institute and town. S. B. Williamson, 704 Natl. Bank Bldg., Charlottesville, consult. engr.; adv. E. N.-R. Dec. 30.

La., Ruston—Jan. 4, by City, 27,110 ft. 8 and 10 in. vitr. clay sewers in various streets, 3 disposal plants, etc. E. T. Archer & Co., 1011 City Bank Bldg., Shreveport, engrs.

Ky., Paducah—Jan. 13, by Bd. Pub. Wks., City Hall, combined sewers in Dists. 1 and 3. Black & Veatch, 701 Mutual Bldg., Kansas City, Mo., and 811 City Natl. Bank Bldg., Paducah, consult. and superv. engrs.; adv. E. N.-R. Dec. 30.

O., Akron—Jan. 13, by W. F. Peters, dir. Pub. Serv., constructing 10,960 ft. 8- to 30-in. vitr. clay sewer in Britain Rd. et al, $46,400; 6,480 ft. 30 in. vitr. clay, 440 ft. 36 in. brick or segmental block trunk sewer outlet in Hawkins Ave. 4, $71,000; also 385 ft. 8- to 20-in. vitr. clay, 4,400 ft. 60 in. and 20 ft. 42 in. brick or segmental block main trunk combined sewer in Willow Run 6, $208,700. J. E. Root, Municipal Bldg., engr.

Wis., Rice Lake—Jan. 25, by City, c/o O. G. Jensen, clk., sewage disposal plant, and 1,600 ft. 24 in. sewers in various streets. $37,000. J. H. A. Brahtz, 214 Builders Exch. Bldg., St. Paul, Minn., engrs. Noted Dec. 23.

Ia., Des Moines—Jan. 6, by City, North East Sewerage System, Line 1, 19,839 ft. 10- to 30-in. main outfall sewers and Line 2, 80,643 ft. 10 in. laterals, etc. $269,395. A. S. Jones, City Hall, engr. Noted Nov. 11.

Neb., Lyons—See "Streets and Roads."

Tex., Brownsville—See "Unclassified."

Okla., Tulsa—Jan. 7, by City, sewers in various streets in business section. $86,968. C. Schultz, city engr.

Okla., Tulsa—Jan. 7, by R. J. Moore, city aud., 8,400 ft. 24- to 60-in. rein.-con., etc. sewers in Sunset Terrace Addition, Project 2-A, $33,710; and 6,110 ft. 36- to 60-in. segmental block sewers in East Lawn Addition, Project 9, $30,029. C. Schultz, City Hall, engr.

Ont., Guelph—See "Contracts Awarded."

Ont., Hamilton—Jan. 10, by F. F. Treleaven, mayor, City Hall, 2,485 ft. twin box concrete sewer in Gage Ave. $200,000. W. L. McFaul, City Hall, engr. Noted Nov. 4.

Ont., London—See "Contracts Awarded."

Bids Received

N. Y., Brooklyn — J. J. Byrne, pres. Brooklyn Boro, Boro Hall, from S. Guerriero, 1024 66th St., sewers in 96th St. $3,730, and East 8th St. $3,117, from Tomassetti & Co., Inc., 1133 60th St., 96th St. $3,730, from R. Iovino, 78 Glenmore Ave., Linden Blvd. $1,765, Avenue H $968, and 9th Ave. $1,268; also from Central Eng. & Contg. Co., 73 8th Ave., New York City, repairing mechanical sewage disposal plant Caisson 3, $21,505. Noted Dec. 16.

Minn., Minneapolis—see "Materials."

Kan., Salina—C. E. Banker, city clk., Dec. 14, sewage disposal plant, 10,000 ft. 20 in. c. i. mains, Dorr tanks, digestion tanks and sludge bed, from H. J. Taylor Constr. Co., Salina, $139,662. Noted Dec. 2.

Neb., Grand Island—City Clerk, 1,700 ft. 90 in. outfall sewers in various streets, from D. Quinton, Kearney, concrete pipe, $33,175; and from Condon Constr. Co., Minneapolis, Minn., segmental block, $35,190. Engrs. est. $37,400. Noted Nov. 25.

Calif., Glendale—Vitr. sewer, etc. in Chevy Chase Dr., McHenry Rd., etc., from L. Massa, 1526 East Florence Ave., Huntington Park, $73,825.

Calif., Los Angeles—From M. N. Guho, 5316 8th Ave., sewers in 8th St., sanitary sewer $108,750, 28,065 lin.ft. house sewers at $1 per ft., total $136,816; from L. Massa, Route 12, Box 80-B, Bell Co., Stanley Ave., sanitary sewer $34,044, 14,889 lin.ft. house sewer $1.25, total $52,656.

Calif., Ventura—From Merritt-Chapman-Scott Corp., San Pedro, outfall sewer pipe line to Pacific Ocean, 400 ft. 18 in. O. D. wrought iron with Armco cover $13,154, 2,600 ft. $60,846, and 1,500 ft. $40,846, 400 ft. 18 in. O. D. copper bearing steel pipe $10,839, 2,600 ft. $44,161, and 1,500 ft. $29,161.

Contracts Awarded

N. Y., Brooklyn — J. J. Byrne, pres. Brooklyn Boro, Boro Hall, repairs to mechanical equipment, Gowanus Pumping Station, at head of Gowanus Canal, to C. Livingston Ricker, Inc., $6,500; repairs to 26th Ward Disposal Plant, foot Hendrix St., to M. Barash, 60 Bergen St., $25,422. Noted Dec. 9.

N. Y., Long Island City—M. E. Connolly, pres. Queens Boro, Queens Subway Bldg., sewer basins in 46th and Auburndale Aves., to J. Z. Szantowicz, 490 Boulevard St., $635; sewers in 88th St., to G. A. Everett, 161-03 Jamaica Ave., Jamaica $46,098, Monroe St., to Welsh Bros. Contg. Co., 32 Queens St., $87,963, in Fairview Ave., to J. Gallo, 30th and State Sts., Elmhurst $5,850. Grand total $140,546. Noted Dec. 23.

New Jersey—State Hy. Comn., Trenton, sewer on Route 1, Cranbury, Middlesex Co., to Celenteni & Wendland, 509 Bridge St., Trenton, $30,764. Noted Nov. 11.

Pa., Chester — Superintendent Streets & Pub. Impvt., constructing Sect. 1 West End Intercepting Sewer, Contr. 1, to Pennsylvania Paving Co., Chester. Noted Oct. 28.

Ala., Birmingham—Sewers in 14 blocks Greenwood Sect. East Birmingham, to Wood-Rucker Constr. Co., Amer. Trust Bldg., $31,627, engrs. est. $32,100; 10 blocks in Central Park Section, 6 blocks in 21st Alley, College Highlands, and 8 blocks in Wylam Section, to J. L. McPoland, 1108 St. Louis St., $38,210, engrs. est. $39,600; also 1 block in 23rd St., to J. J. Goddard, 436 Powell Ave., $702, engrs. est. $760. Grand total $70,539. Noted Oct. 7.

O., Dayton—See "Streets and Roads."

Mich., Detroit — Dept. Pub. Wks., vitr. crock and 2 ring brick sewers in Laterals 4720, 4734, and 4735, to Western Constr. Co., 5623 Wesson Ave. $16,718; Laterals 4733, 4746 and 4753, to N. DiPono, 13535 Woodward Ave., $15,045; Laterals 4736, 4738 and 4744, to Waterway Constr. Co., 516 Transportation Bldg., $39,880; Lateral 4748, to T. D. Nolan, Plymouth Rd. and Pere Marquette R.R. tracks, $10,435; Lateral 4749, to W. Blanck Co., 40 Seven Mile Rd. E., $17,135; Lateral 4750, to Michigan Constr. Co., 2237 St. Joseph St., $11,990, and Lateral 4751, to A. Arcarri, 13535 Woodward Ave., $14,700. Grand total $140,559. Noted Dec. 9.

Kan., Wellsville — Sewers in various streets, to W. B. Carter, 609 United Bank Bldg., Sioux City, Ia., $48,169. Noted Nov. 18.

Mo., New Madison—Votetd $25,000 bonds, sewers in various streets.

Ark., Little Rock—For 55,750 ft. 6- to 12-in. sewers in Little Rock-Highland Sewer Dist. 26, to McEachin & McEachin, Home Insurance Bldg., $73,850.

Calif., Los Angeles—For 6,650 ft. 6 in. vitr. sewer in Seneca Ave., to R. A. Wattson, 1026 North McCadden Pl., $31,737. Noted Dec. 16.

Calif., Los Angeles—For 6,650 ft. 6 in. vitr. sewer, etc., in Seneca Ave., to R. A. Wattson, 1026 North McCadden Pl., $31,738. Noted Dec. 16.

Calif., Los Angeles—Rein.-con. storm drain in Verdugo Rd., to T. Kelly & Sons, 806 Hill-street Bldg., $541,234. Noted Dec. 2.

Calif., Los Angeles — Supervs. Los Angeles Co., 9.14 mi. cement sewers in Belvedere Dist., Co. Impvt. 151, to Harmon Co., 1501 Mission Rd., Alhambra, $114,714. Noted Nov. 25.

Ont., Guelph—Will extend 18 in. sewers in various streets, by day labor, under direction H. S. Nicklin, engr., City Hall. $35,000. Noted June 17.

Ont., London—City Council will extend 8- to 20-in. sewers by day labor, under direction W. P. Near, city engr $85,000.

Waste Disposal

Proposed Work

Ont., Ford City—Council plans constructing incinerator, $32,000. J. F. Foster, City Hall, engr.

Bids Desired

Fla., Jacksonville—Jan. 5, by City Comn., F. H. Owen, chn., trailer equipment for garbage collection and disposal, also trucks.

Mo., St. Louis—City taking bids altering, equipping, etc., portion Inland Waterways Corporation Dock, foot of Rutgers St., for loading garbage, $32,000; and abandons project for rein.-con. garbage unloading dock, Chouteau Ave., $56,000. Noted Dec. 23 under "Unclassified."

Bridges

Proposed Work

N. Y., Syracuse—New York Central R.R. Co., Grand Central Terminal, New York City, G. W. Kittredge, ch. engr., plans 42 ft. concrete girder type bridge, at Beech St., here. $25,000.

Pa., Beaver — Comrs. Beaver Co., plan replacing Monaca-Rochester Bridge with new bridge over Beaver River. $500,000.

Miss., Lucedale — See "Streets and Roads."

O., Cleveland—Plans steel and concrete drawbridge, at Main Ave. $600,000. R. Hoffman, City Hall, engr.

Wis., Baraboo—State Hy. Comn., Madison, plans bridge over Baraboo River, here. $380,000. J. T. Donaghey, Madison, ch. engr.

Tex., Corpus Christi—Flour Bluff Causeway Co. making plans timber and concrete causeway from Flour Bluff to Padre Island, near here. $250,000. Private plans.

Okla., Courtney—Airline Toll Bridge Co., Dallas, Tex., making preliminary plans 240 span 6,100 ft. pile trestle toll bridge over Red River, Love Co., near here. $150,000. H. F. Mitchell, Waurika, engr.

Wash., Seattle — City Council making plans constructing permanent steel and concrete bridge, at West Garfield St. connecting 15th Ave. N. W. and Magnolia Bluff. $750,000.

Ont., Arnprior — Town Council plans bridge and dam on Madawaska River. $123,561.

Ont., Toronto — Dept. Pub. Highways, Parliament Bldgs., plans probably 7 span, 1,000 ft. high level bridge, concrete or steel trestle and trusses on concrete foundations, to have two 6 ft. sidewalks, etc. Hoggs, Hallow, Yonge St. $750,000. R. M. Smith, 110 University Ave., ch. engr.

Bids Desired

Pa., Phila.—Jan. 3, by Montgomery Smith, purch. agt. Pennsylvania R.R. Co., at 17th and Filbert Sts., structural metal work on bridge, Contr. 7-1927. A. C. Shand, Broad St. Sta., ch. engr. railroad.

Ill., Fairfield—Jan. 20, by Comrs. Skillet Fork River Outlet Union D. D., at office Clerk Wayne Co., 110 ft. high steel truss bridge with 12 ft. aprons and 16 ft. concrete roadway. A. J. Poorman, secy.

Kan., Wichita—Jan. 4, by Clerk Sedgwick Co., four 40 ft. and fourteen 30 ft. deck girder, also 140 ft. steel truss span bridges and grading, etc. 0.53 mi. Federal Aid Project 344-B. M. Roseberry, Wichita, co. engr.

Tex., Panhandle — See "Streets and Roads."

Bids Received

N. J., Atlantic City—Bd. Freeholders Atlantic Co., Guarantee Trust Bldg., Dec. 15, reconstructing Albany Ave. Bridge spanning inside thorofare on Pleasantville Blvd., from S. S. Thompson & Co., Inc., 1 Herbert St., Red Bank, N. J., $482,185. Noted Nov. 25.

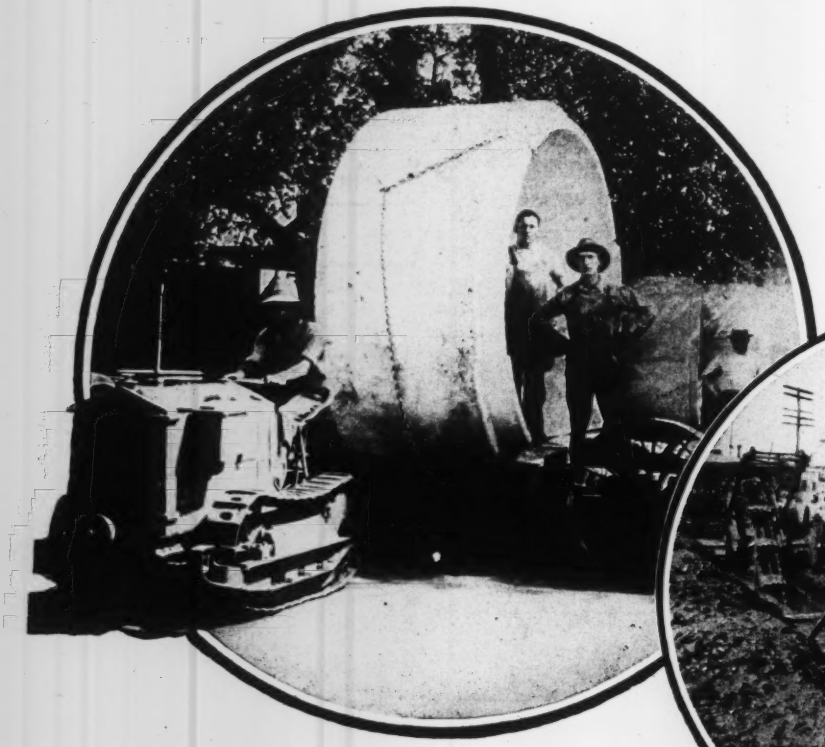
North Carolina — State Hy. Dept., Raleigh, rein.-con. bridges, etc., on Project 304, Bladen Co., from J. L. Brinkley, Thomasville, $25,971; on Project 874, Rutherford Co., from D. S. Blount, Charlotte, $50,512; on Project 778, Wilkes Co., and Project 872, Rutherford Co., from E. A. Wood & Co., Andrews, $46,998 and $31,342 respectively; on Project 649, Mecklenburg Co., from J. S. Bowers, Whiteville, $44,118; on Project 867, Polk Co., from M. T. McArthur, Johnson City, Tenn., $51,840.

Wis., Two Rivers—City Clerk, City Hall, Dec. 29, steel bascule bridge over West Twin River, at Washington St., from Milwaukee Bridge Co., 1400 34th St., Milwaukee, $145,340. Noted Nov. 25.

Contracts Awarded

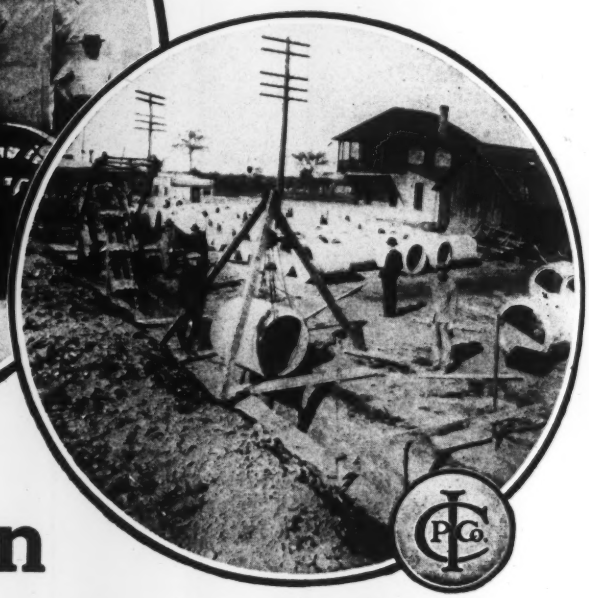
New Jersey—State Hy. Comn., Trenton, reconstructing timber trestle portions of State Highway Bridge, crossing Barnegat Bay, between Island Heights and Seaside

Constr. News page 413



Left—Delivering 96-inch pipe for use in business district of Oklahoma City

Below — Laying 36-inch pipe, built at central yard along the line of trench



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He gets reinforced concrete pipe of highest quality, built strictly to specifications by an organization of concrete specialists. And he gets the pipe right when and where he wants it—the precast units are built on the job, or near by and delivered along the trench.

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FRANK NOVOTNY, Mgr.

CLEVELAND, OHIO
H. S. WAMSER
Electric Building,
Cleveland, Ohio

COLUMBUS, OHIO
Ohio Sales Agency
300 South High St.
E. W. HAWKE, Mgr.

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INDEPENDENT PIPE

Precast Reinforced Concrete Pipe for Permanent, Economical Sewers

Bridges (Continued)

Heights, Ocean Co., to Eastern Eng. Co., 4 North Carolina Ave., Atlantic City, $300,-000. Noted Nov. 18.

Pa., Pittsburgh — City Council, 380 ft. steel arch bridge over Woods Run, at California Ave., to Fort Pitt Bridge Wks., Oliver Bldg., $287,353. Noted July 15.

North Carolina — State Hy. Dept., Raleigh, rein.-con. bridges, etc. on Project 657, Iredell Co., to J. L. Brinkley, Thomasville, $43,735. Noted Sept. 16.

Tennessee—State Dept. Highways & Pub. Wks., Nashville, bridge on Project 112-A, Gibson Co., to L. J. Utley & Co., Mt. Vernon, Ind., $54,492; and bridges on Project 247-A and B, Lauderdale Co., to Montgomery & Parker, Rockport, Ind., $42,547. Noted Nov. 4, under "Streets and Roads."

O., Dayton — Comrs. Montgomery Co., sub-structure 100 ft. span steel truss bridge over Bear Creek, to O. Puterbaugh, Wolf Creek Pike, $8,992; and superstructure, to Brookville Bridge Co., Brookville, $26,340. Noted Dec. 16.

Wis., La Crosse—County Hy. Com. and State Hy. Comn., constructing Cronk Bridge, rein.-con. and steel, La Crosse Co., to T. J. Frederick-Chernus Co., 524 McKnight Bldg., Minneapolis, Minn., $27,790.

Mo., Cape Girardeau—Cape Girardeau Bridge Co., c/o Chamber of Commerce, C. L. Harrison, chn., sub-structure 4,200 ft. concrete and steel bridge over Mississippi River, to U. G. I. Contg. Co., Broad and Arch Sts., Phila., Pa., $400,725; and superstructure, to Amer. Bridge Co., 1519 Liberty Central Bldg., St. Louis, $717,098. Noted Dec. 23.

California—See "Streets and Roads."

Dams

Proposed Work

N. Y., Mount Morris—Rochester Gas & Electric Co., East Ave., Rochester, making plans storage dam, 180 ft. high, 1,200 ft. long at toe and 2,500 ft. at crest, incl. 100,-000 cu.yd. rock excav., 500,000 cu.yd. rein.-con. and 10,000 tons steel. $10,000,000. Private plans.

Ont., Arnprior—See "Buildings—Industrial."

Ont., London — Utilities Comn. making plans cement dam. $150,000. E. V. Buchanan, c/o owner, engr.

Contracts Awarded

Mexico — Group of American and Canadian Capitalists, dam in River Lerma, near Centepec, State of Michoacan, to Mexican Light & Power Co., Mexico City, c/o F. W. Teele, genl. mgr. Engrs. est. $16,000,000. Noted Oct. 28.

Railways

Proposed Work

Ontario—See "Buildings Industrial under Toronto, Ont."

Contracts Awarded

Mississippi and Alabama—St. Louis-San Francisco Ry. Co., F. G. Jonah, ch. engr., St. Louis, Mo., grading and bridging 57.5 mi. of new 175 mi. cut-off from Aberdeen, Miss. to Kimberley, Ala., to Ross-Wogan Constr. Co., Kansas City, Mo., approximately $800,000. This corrects report in Dec. 16 issue.

Excavation, Drainage, Irrigation, Levees, River and Harbor

Proposed Work

Fla., Fort Lauderdale—Broward Co. Comn. plans repairing south jetty at entrance New River. $10,000. E. Hendrickson, civil engr.

Louisiana—Madison Parish, Tallah, rejected bids 27,000 cu.yd. earthwork, on Henderson Point Spur, and awarded contract for 10,000 cu.yd. Legonier Levee enlargement, to Douglas, Buchanan & Crow, Shreveport, $1,995.

Mo., Arkoe — Arkoe D. D., C. C. Carr, pres., making preliminary plans approximately 5 mi. drainage ditches, incl. 321,000 cu.yd. earth, 22,360 cu.yd. solid and 8,435 cu.yd. loose rock excav., etc. $100,000. Leslie Eng. Co., 820½ Felix St., St. Joseph, engrs.

Tex., Brownsville—See "Unclassified."

Tex., Luling—Takes bids about Jan. 1, permanent paving 8 blocks various streets. $50,000. Terrell Bartlett Engineers, Calcasieu Bldg., San Antonio, engr. Noted June 24.

Nev., Lovelock — Irrigation Dist. voted $1,287,000 bonds, constructing Oreana Dam and reservoir on Humboldt River. Noted Dec. 2.

Calif., Oakdale—Oakdale Irrigation Dist. making plans enlarging main canal, installing concrete pipe, purchasing portable air compressor, etc. $50,000 available.

Bids Desired

S. C., Scranton—Jan. 4, by J. M. Parker, chn. Bd. Supervs. High Hill Drainage Dist., constructing canals, ditches, laterals, etc. approximately 300,000 cu.yd. earth excav.

Miss., Bay St. Louis—Jan. 4 (extended date), by Road Protection Com. of Hancock Co., Court House, here, 11 mi. seawall, incl. Waveland Seawall, extending to Bayou Caddo connecting with Bayou Ladosse near mouth Jordan River, incl. 48,-800 ft. stepped type concrete wall, 2,679 ft. 12 in. and 36 in. pipe, 261,500 cu.yd. excav., also constructing boulevard behind seawall, etc. $1,250,000. J. W. Billingsley, Interstate Bank Bldg., New Orleans, La., engrs. Noted Nov. 11.

Ill., Carthage—Jan. 3, by G. H. Hoffman, G. E. Meeker and L. A. Wehner, comrs. Hunt D. D., at office J. W. Westfall, clk. Hancock Co., work on Rocky Run and Schuhart Diversion Channels and Levees, also ditches, incl. 1,599,611 cu.yd. excav., 1 concrete spillway, 6 check dams, 4,310 sq.yd. stone rip rap, etc. Goodell & Millard, Beardstown, dist. engrs. Noted Oct. 7.

Ill., Quincy—Jan. 3, by A. A. Sipfel, H. C. Saltonstall and J. Ensminger, comrs. Lima Lake D. D., at office J. W. Smith, clk., Adams Co., work on Rocky Run Diversion Channel and Levees, also ditches, 1,292,150 cu.yd. excav., 4 check dams, 1,440 sq.yd. stone rip rap, etc. Goodell & Millard, Beardstown, dist. engrs.

Minn., Duluth—Feb. 2, by P. O. Phillips, city comr., cutting through Points of Rocks on Superior St. between 8th and 14th Aves. west and constructing breakwater off London Rd. between 12th and 14th Aves. east. $571,000. Former bids rejected. J. Wilson, city engr. Noted Oct. 7.

Tex., Amarillo—See "Waterworks."

Tex., Brownsville—Jan. 12, by J. J. Bishop, aud. Cameron Co., flood contro' works in Units 1 to 14 (inclusive) Div. A, North Floodway, and Units 1 to 12 (inclusive) Div. B, Arroyo Colorado Floodway, 8,000 acres clearing and grubbing, 3,000,000 cu.yd. levee work, etc. W. O. Washington, Court House, co. engr. Noted Dec. 23.

Contracts Awarded

Louisiana—See "Proposed Work."

La., Pineville—City and Rapides Parish, combination levee and riverside drive, etc., to S. T. Hulse, Destrahan. Noted Nov. 25.

Wis., Kenosha—See "Buildings—Commercial."

Streets and Roads

Proposed Work

Mass., Cambridge (Boston P. O.)—Plans widening Bway. from Mechanics to Kendall Squares. To exceed $25,000. Private plans.

Mass., Dorchester (br. Boston) — Dept. Pub. Wks., Boston, plans laying out and constructing Fuller St. and Sumner Terrace as highway, here. $25,000. J. H. Sullivan, comr.

New York — State Hy. Comn., A. W. Brandt, comr., Albany, plans rein.-con. paving 6.5 mi. highway, 18 ft., in Steuben Co. $50,000.

N. Y., Rochester—Plans grading, sidewalks and sheet asphalt on concrete widening 31,000 sq.yd. East and West Main Sts. $375,000. C. A. Poole, City Hall, engr.

N. Y., Syracuse — Bd. Contr. & Supply soon takes bids sheet asphalt paving 17,770 sq.yd. South Ave. N. F. Pitts, Jr., City Hall, engr.

Miss., Lucedale—George Co. postponed $275,000 bond election improving 16 mi. roads, and constructing 2 concrete and steel bridges over Pascagoula River, one near Merrill and other at Wilkersons Ferry. Noted Nov. 11.

Miss., McComb—Soon takes bids grading, brick paving, etc. 3 blocks Edgar St. and east approach of viaduct over Illinois Central R.R. tracks, also asphalt paving 5 blocks Michigan Ave. L. W. King, City Hall, engr.

Tenn., McKenzie—Voted $200,000 bonds, paving various streets. Noted Nov. 4.

Tenn., McKenzie—Voted $225,000 bonds, improving 4 blocks various streets. Long & Co., Bennie Dillon Bldg., Nashville, engrs.

O., Cincinnati—Plans improving various streets, and grade crossing elimination. H. F. Shipley, city engr. $3,000,000. Noted Dec. 2.

O., Columbus — Franklin Co., Court House, made plans grading, paving, etc., 0.59 mi. Olentangy Blvd. 2, and Coke Ave., sheet asphalt on concrete $68,900; 3,286 ft. Denver Ave., Edgewood and Virginiale Rds., rein.-con. or vibrated concrete $32,-800; 1.3 mi. Minerva Lake Rd., bituminous concrete $82,200, or sheet asphalt on concrete $87,000; also 1,630 ft. Harding Rd. 2, rein.-con. $19,200, or vibrated concrete $19,100. C. C. Lattimer, co. surv.

O., Lakewood (br. Cleveland)—Plans improving various streets. $100,000. E. A. Fisher, city engr.

O., Martins Ferry — Plans resurfacing various streets. $100,000. C. P. Lash, city engr.

O., Rocky River—Plans paving various streets. $118,000.

O., St. Marys—Plans improving various streets. $40,000.

O., Steubenville—Plans improving various streets. $150,000. J. McGinnis, city engr.

O., Toledo—Plans widening and extending various streets. $500,000; also improving various streets. $802,000. L. T. Owen, city engr.

Ia., Danbury—Soon takes bids grading, curbing, concrete, brick or asphalt paving, etc., 25,000 sq.yd. various streets. W. E. Buell & Co., 205 Davidson Bldg., Sioux City, engrs.

Ia., Monticello—Takes bids about Jan. 10, asphalt, concrete, brick or asphaltic concrete paving 60 blocks various streets. H. R. Green Eng. Co., Bever Bldg., Cedar Rapids, engrs.

Minnesota — Comrs. Ramsey Co. (St. Paul) and Dakota Co. (Hastings), at St. Paul, rejected bids Dec. 14, grading 75,300 cu.yd. and graveling 10,000 cu.yd., etc., Project 25-53-A; also grading 171,900 cu. yd. and graveling, etc., 20,000 cu.yd. Project 26-53-B. B. N. Coates, 900 Guardian Life Bldg., St. Paul, engrs. Noted Dec. 9.

Mo., St. Louis—Bd. Pub. Serv., 208 City Hall, received no bids asphaltic concrete paving 6,700 sq.yd. Bird Ave. Will readvertise. S. P. Ashcraft, Jr., City Hall, engr.

Texas—State Hy. Comn., Austin, E. T. Smith, chn., postponed taking bids Dec. 20 and Jan. 8, grading, bridging and surfacing 9.788 mi. Highway 12-A, Jim Wells Co.; 5.871 mi. Highway 35, San Jacinto Co.; 2.518 mi. Highway 12, 10,998 mi. same road, Federal Aid Project 505, and 20.152 mi. same road, Federal Aid Project 2, all in Brooks Co.; 6.152 mi. Highway 6, Federal Aid Project 471-C, Trinity Co.; 15.359 mi. Highway 19, Federal Aid Project 460-B, Unit 2, Walker Co.; 7.762 mi. Highway 5, Federal Aid Project 501, Hardeman Co.; and 5.231 mi. Highway 3, Federal Aid Project 324-D, Terrell Co. Will Readvertise some time in January.

Tex., Alamo—Soon takes bids permanent paving various streets. $35,000 bonds voted. Address J. G. Cox, mayor.

Tex., Laredo—Webb Co. election soon $900,000 bonds, hard paving 48 mi. road to serve oil fields of Webb Co. and connect with hard surface roads in Duval and Jim Hogg Counties. T. E. Huffman, Ladero, co. engr. Noted Dec. 2.

Okla., Woodward—Rejected bids Dec. 16, concrete paving 72,000 sq.yd. Main, 6th and 8th Sts. $220,000. Black & Veatch, Mutual Bldg., Kansas City, Mo., engrs. Noted Dec. 2.

California—Kern Co. (Bakersfield) Santa Barbara Co. (Santa Barbara) and Ventura Co. (Ventura) plan election $500,000 bonds, constructing Tri-County Joint Highway Dist. Total $1,200,000. Federal and State Aid provide balance of funds.

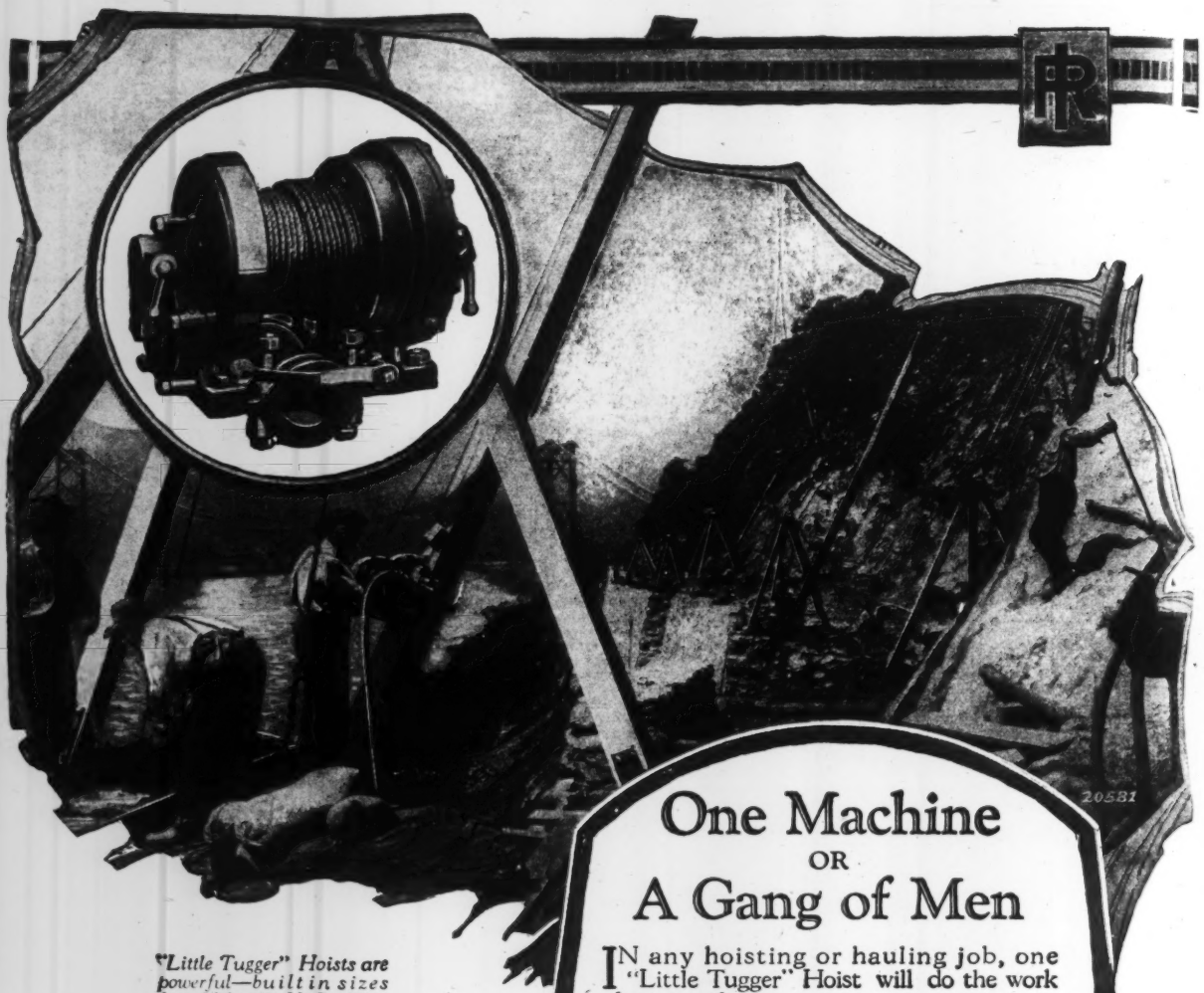
California—Kern Co. (Bakersfield) Tulare Co. (Visalia) and Inyo Co. (Independent) plan constructing Mt. Whitney Highway. $1,004,000. Kern and Tulare Counties pay 45 per cent each of cost and balance by Inyo Co. J. R. Thornton, engr. Kern Co. and L. Moye, surv. Tulare Co.

Bids Desired

N. Y., Syracuse — See "Contracts Awarded."

Pennsylvania—Jan. 7, by State Hy. Dept., Harrisburg, rein.-con. paving, etc. 10,171 sq.yd. Route 167 Sect. 4, Monroe Co. W. H. Connell, eng. executive and deputy secy. highways.

Constr. News page 414



One Machine OR A Gang of Men

IN any hoisting or hauling job, one "Little Tugger" Hoist will do the work of a gang of men.

In the words of the foreman on the recently completed Bear Mountain Highway —"The twelve 'Little Tugger' Hoists handling the rock for the retaining wall are doing the work of a small army of men." This particular job involved building 35,000 cubic yards of retaining wall along a steep mountain side along the Hudson River.

The job is only one of hundreds where "Little Tugger" service means speed and economy.

"Little Tugger" Hoists are powerful—built in sizes from 3½ to 12 H. P. They are durable—most of the hoists built eleven years ago are still in operation. They are portable—can be mounted anywhere and used in a number of places in the same shift. They are entirely safe.

Bulletin 4059 describes Single Drum Hoists.

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Streets and Roads (Continued)

Fla., Sanford—Jan. 10, by City Comn., grading, sheet asphalt on concrete and sand paving 7,112 sq.yd. Persimmon, Maple and Holly Aves., $32,000; grading, and sheet asphalt on 3 in. sand paving 8,466 sq.yd. Cedar Ave., Col Way, and Central St., $40,000; grading and sheet asphalt on 6 in. rock paving 7,780 sq.yd. 3rd St. $34,600, and 9,755 sq.yd. French Ave. $45,-270. F. T. Williams, Sanford, engr.

Ala., Birmingham — Jan. 25, by City Comn., concrete asphalt paving 1 block 6th St. W., 60 ft. $3,100; and 2 blocks 3rd St., Ensley, 50 ft. $5,800; also guttering, sidewalks and concrete asphalt paving 3 blocks Altamont Rd., 40 ft., $10,000.

Miss., Grenada—Jan. 4, by Bd. Supervs. Grenada Co., improving 10.64 mi. Grenada-Calhoun City Rd., Federal Aid Project 147-B, 63,711 cu.yd. excav., 51,505 cu.yd. borrow, 51,685 lb. reinforcing, 5.83 mi. Bermuda sod, etc. H. C. Dietzer, Jackson, engr. Noted Jan. 7.

Miss., Vicksburg—Jan. 3, by Board Supervs. Warren Co., grading, Warrenite or concrete paving, etc. 1.4 mi. National Cemetery Rd., 28 ft. $50,000. H. C. Dietzer, Jackson, engr. Noted Dec. 9.

O., Columbus—Jan. 4, by W. H. Duffy, dir. Pub. Serv., grading, curbing, laying necessary water services and sewer connections and paving 12,598 sq.yd. Eastview, Safford, Virginia and Thomas Aves., brick $76,031 and asphalt $82,222.

O., Marion — Jan. 3, by Comrs. Marion Co., improving East River-Cardington Rd. $35,000. C. Leanen, Marion, engr.

Ia., Iowa City—Jan. 4, at office Auditor Johnson Co., grading, paving, etc., 153,485 sq.yd. Federal Aid Projects 9 and 296, U. S. Highway 161.

Kan., Marysville—Jan. 25, by Clerk Marshall Co., grading 1.098 mi. Federal Aid Project 182-A. F. E. Hayes, co. engr.

Kan., Wichita—See "Bridges."

Kan., Wichita—Sedgwick Co. taking bids and opens same about Feb. 15, concrete paving 91,000 sq.yd. State Highway 96, Federal Aid Project 342-B. M. Rosenberry, Wichita, co. engr.

Neb., Lyons—Jan. 4, by G. Buckley, village clk., curbing, guttering, storm sewers, watermains and various types paving, etc. 21,150 sq.yd. various streets. Grant, Fulton & Letton, 525 South 13th St., Lincoln, engrs.

Mo., Sedalia—Jan. 14, by C. A. Thomas, supt. Sedalia Twelve Mile Special Road Dist., Citizens Natl. Bank, grading and bituminous macadam paving 2.5 mi. various streets, 18 ft.

Tex., Panhandle—Jan. 11, by L. O. Cox, engr., Panhandle, grading and bridging 20.445 mi. Highway 117, State Aid Project 713, Unit 1, for City. $200,000.

Okla., Seminole—Jan. 3, by E. Magruder, city clk., grading, curbing and concrete paving 10,100 sq.yd. 1st St. $38,222. Long & Co., Colcord Bldg., Oklahoma City, engrs.

Idaho—Jan. 14, by Commissioner Pub. Wks., at office P. B. Wilson, dist. engr., Pocatello, grading and paving, etc. 8,523 sq.yd. Pocatello-Ft. Hall Rd., Project 78, for State Hy. Comn. Former bids returned unopened. Noted Nov. 18.

California — Waud, Ramsell & Lewis, engrs., 428 Oak St., taking bids grading 70,800 cu.yd. in Ventura Heights Tract (San Buenaventura), Ventura Co. Owner's name withheld.

Calif., Corona—City Trustees taking bids curbing, guttering and oil macadam paving, etc., Buena Vista Ave., etc. To exceed $25,-000. Currie Eng. Co., Stoneman Bldg., Alhambra, engrs. Noted Nov. 18.

Calif., El Monte—City Trustees taking bids and open same about Jan. 4, curbing, walks and 5- to 7-in. concrete on 2 in. asphaltic concrete surfacing, etc., 15,326 sq. ft. Central and Kauffman Aves. J. C. Ellis, 4 Palm Court, engr.

Calif., San Diego—Jan. 10, by Common Council, curbing, sidewalks, 5 in. concrete paving 242,946 sq.ft., etc., Playa del Sur et al. F. A. Rhodes, city engr. Noted Nov. 18.

Calif., Sierra Madre — Jan. 13, by L. Dietz, city clk., concrete and 3 in. oil macadam paving, etc., Acacia Ave., Camillo St., etc. To exceed $25,000.

Bids Received

N. Y., New York—See "Unclassified."

North Carolina—State Hy. Dept., Raleigh, clearing, grubbing, grading and topsoiling, etc., 6 mi. Project 874, Rutherford Co., and 11.4 mi. Project 867, Polk Co., from Geer & Wilson, Rutherfordton, $49,-904 and $86,273 respectively, 14.8 mi. Project 778, Wilkes Co., from C. B. Hester, Greensboro, $130,015, and 13.2 mi. Project 304, Bladen Co., from Beal Bros., Bear Creek, $77,602; clearing, grubbing and grading, etc., 13.7 mi. Project 649, Mecklenburg Co., from J. K. Cecil, Lexington, $44,-192, 7.1 mi. Project 216, Craven Co., from J. M. Gregory & Co., Pittsboro, $34,991, and 9 mi. Project 229, Greene Co., from Hudson & Scruggs, Wilmington, $41,145; grading, concrete or asphaltic paving 8.07 mi. Project 682, Scotland Co., from Noll Constr. Co., Charlotte, $133,220, and 1.44 mi. Project 6490, Mecklenburg Co., from Caldwell Constr. Co., Charlotte, $43,960. Noted Dec. 2.

Calif., Beverly Hills—City Council, B. J. Firminger, clk., Dec. 6, from Griffith Co., Los Angeles Railway Bldg., Los Angeles, improving La Cienega Blvd., 825 lin.ft. curbing at $0.65 per lin.ft., 5,323 sq.ft. sidewalk $0.21, 181,300 sq.ft. grading $3,400, 175,527 sq.ft. 8 in. concrete paving $0.27, etc., total $52,492.

Calif., Compton — City Trustees grading and 6 in. vibrolithic concrete paving, etc., Olive St., from O. U. Miracle, 227 Ave. D, Los Angeles, $45,168. Noted Dec. 2.

Cuba—Special Bd. of Awards, of Cuban Government, recommended contract for 750 mi. Central Highway, be awarded to Warren Bros., 9 Cambridge St., Boston, Mass., $75,896,653. Noted Dec. 9.

Contracts Awarded

Massachusetts—Dept. Pub. Wks., Boston, rein.-con. paving 11,886 ft. highway in Seekonk, to Lane Constr. Co., 37 Colony St., Meriden, Conn. $113,978, and 5,347 ft. in Wilbraham, to Adams & Ruxton Constr. Co., Springfield $49,707; rein.-con. and bituminous macadam paving 9,564 ft. in Attleborough, and bituminous macadam paving 9,900 ft. in Brockton, to C. Bianchi, Framingham, $124,227 and $86,293 respectively, 8,610 ft. in Braintree and Quincy, to Lawton Constr. Co., Providence, R. I. $104,689, 6,664 ft. in Chelmsford, to A. Pollatte, Dracut, $47,321, 3,830 ft. in Weymouth, to W. H. Hinman, Medway, $48,197, and 19,050 ft. in Westfield, to Kelleher Corp., Turners Falls $150,267. Grand total $724,629.

Mass., Quincy (Boston P. O.)—Dept. Pub. Wks., Boston, bituminous macadam paving 10,480 ft. Sect. Southern Route, here, to P. Caputa, 363 Hanover St., Boston. $226,-465. Noted Dec. 23.

N. Y., Brooklyn — J. J. Byrne, pres. Brooklyn Boro, Boro Hall, sidewalks, etc., on Cortelyou Rd., to F. Persicano, 350 Fulton St., $2,342; stone block paving Flushing Ave., to Borough Asphalt Co., 1301 Metropolitan Ave., $23,057; asphalt paving Benson and 12th Aves., to B. Turecamo Contg. Co., 8706 Bay 12th St., $6,972 and $11,272 respectively, East 28th St., to D. J. McCoy Asphalt Co., East 57th St. and Avenue U. $12,014. Grand total $55,657. Noted Dec. 16.

N. Y., Brooklyn — J. J. Byrne, pres. Brooklyn Boro, Boro Hall, to B. Turecamo, Contg. Co., 8706 16th Ave., asphalt paving East 5th St. $5,118, 19th Ave. $4,132, and 74th St. $6,944, and to Uvalde Asphalt Paving Co., 1 Bway., New York City, Rockaway Ave. $6,904; to Castle Bros., Johnson Pl. and Snyder Ave., grading, etc. East 29th St. $5,768, and 74th St. $6,770, and to C. Bennett Impvt. Co., for Rutland Rd. $8,653. Grand total $44,289. Noted Dec. 23.

N. Y., Syracuse—Onondaga Co., will reconstruct 7 mi. Baldwinsville-Seneca Turnpike, 7th North, by day labor. $200,000. R. B. Traver, Syracuse, highway supt.

New Jersey—State Hy. Comn., Trenton, concrete paving 14,535 sq.yd. road from Ocean City to Somers Point, Cape May Co., to W. Eisenberg, Smith-Austermuhl Bldg., Camden, $62,320. Noted Dec. 2.

Pa., Phila.—Dept .Pub. Wks., Bureau of Highways, grading Longshore St., to Morrissey Bros., 4345 North 7th St. $1,190, and 59th St., to C. Gerlach, 6118 Pine St., $5,093; asphalt paving (assessment work), Valvern St., to Barner Asphalt Paving Co., 239 North 30th St. $6,107, and Thompson St., to Mack Paving & Constr. Co., Nicetown Lane and Luzerne St. $12,848; improving Lisser, 84th and 85th (country) Rds., and furnishing sand for asphalt paving mixtures, to Union Paving Co., 123 South 21st St. $17,453, and $1,250 respectively; steel for repairing 6th St. and Allegheny Ave. Bridge, to Amer. Fabricated Steel Co., 2442 North Bodine St., $1,656; furnishing limestone dust, to E. J. Lavino & Co., Bullitt Bldg., $1,748; fuel oil, to Atlantic Refining Co., 260 South Broad St., $2,188; and crushed stone, to Van Sciver Corp., Parkway and 24th Sts., $2,775. Grand total $52,308. Noted Dec. 23.

W. Va., Princeton—Mercer Co., concrete surfacing road from Bluefield to Abshire Gap, to Wright & Mays, Bluefield, $58,000.

North Carolina—State Hy. Dept., Raleigh, clearing grubbing, grading, etc. 10.38 mi. Project 637, Iredell Co., to W. E. Graham, Mt. Ulla, $63,890. Noted Dec. 16.

Fla., Palatka—Curbing, guttering, brick with asphalt filler paving South 8th St., etc., to T. B. Gillespie, Palatka, $86,368.

Tennessee—State Dept. Highways & Pub. Wks., Nashville, improving Project 112-A and B, Gibson and Carroll Counties, to Hinson Bros., Muskogee, Okla., $47,377; Project 112-C, Carroll Co. and Project 347-A, Lauderdale Co., to R. E. Martin, Selmer, $104,500 and $86,952 respectively; Project 140-C, Meigs Co., to R. A. Scott, Selmer, $111,991; Project 155-A, Lincoln Co., to Alley Constr. Co., Bristol, $37,440; Project 310-C, Unicoi Co., to Hughes & Ray, Newland, S. C., $111,420; Project 343, Crockett Co., to S. R. Hall & Co., Newbern, $77,660; and Project 347-B, Lauderdale Co., to Cresap Bros., Humboldt, $31,556. Grand total $608,896. Noted Nov. 4.

O., Cincinnati — Comrs. Hamilton Co., grading and concrete repaving 47,100 sq.yd. North Bend Rd., to Central Constr. Co., Columbus, $176,782. Engrs. est. $188,734. Noted Dec. 16.

O., Dayton—Montgomery Co., grading, laying 12- to 24-in. vitr. sewers and concrete paving grounds new County Children's Home, to V. C. Smith, 209 South Perry St., $25,565.

Ill., Chicago—Bd. Local Impvts., Room 207, City Hall, miscellaneous work on South Water Street Improvement, to U. S. A. Co., 844 Rush St.; grading, curbing, guttering, and asphalt on present macadam paving, etc., portion North Menard Ave., to J. V. McCarthy Co., 77 West Washington St., also East 62nd St., Vernon, Eberhart, Rhodes, Champlain, Langley, Evans and Lawrence Aves., to R. F. Conway Co., 844 Rush St.; grading, curbing, guttering, and 1½ in asphaltic concrete on 8 in. concrete and 5 in. granite block on sand or limestone paving, etc., portion South State St., to Amer. Asphalt Paving Co., 133 West Washington St. Noted Nov. 18.

Wisconsin—State Hy. Comn. and State Conservation Comn., at Div. Office 9, Madison, improving 1.14 mi. Nelson-Dewey Park Rd., State Project 9187, Grant Co., to Stevens Bros., 612 Endicott Bldg., St. Paul, Minn., $26,771. Noted Dec. 9.

Mo., Joplin—For 6 in. concrete paving approximately 5,180 sq.yd. Empire St., to V. E. Koch, 417 Joplin St., at $1.74 per sq.yd.

Ark., Pine Bluff—Grading, curbing, sidewalks and guttering 50 blocks Dist. 3, to Rowan & Rickard, Pine Bluff, approximately $40,000. Noted Sept. 23.

Ark., Little Rock—Grading, curbing, guttering and sheet asphalt, asphaltic concrete, Warrenite on concrete or concrete on asphalt paving 46,158 sq.yd. Little Rock-Highland Dist. 24, to M. D. L. Cook, Home Insurance Bldg., $89,757; 5 in. rein.-con. paving 35,200 sq.yd. Sect. 2, same road, to G. Garms, Rector Bldg., $80,256.

Tex., Abilene—Warrenite bitulithic paving 6 blocks South 11th St., to West Texas Constr. Co., Abilene, approximately $32,000.

Tex., Amarillo—For 3 in. brick on 6 in. concrete paving 46,000 sq.yd. various streets, to Texas Road Co., Santa Fe Bldg., Dallas, and 17,000 sq.yd. various streets, to El Paso Bitulithic Co., El Paso, each at approximately $3.90 per yd.

Okla., Shattuck—E. G. Fulton, city clk., 6 in. concrete paving 12,885 sq.yd. various streets, to E. W. Baker & Co., Medical Arts Bldg., Oklahoma City, $37,600.

Wash., Tacoma—Filling and paving East 15th St., to George Milton Savage Co., 502 North Ainsworth St., $25,456. Noted Sept. 16.

California—State Hy. Dept., Sacramento, grading, crushed gravel or stone surfacing approximately 2.1 mi. road between Fernbridge and Loleta, Humboldt Co., to Kaiser Paving Co., Amer. Bank Bldg., Oakland, $78,556, engrs. est. $121,175; also repairing 2 pile and timber structures at Sta. 331 and 337, San Mateo Co., to Healy-Tibbitts Constr. Co., 64 Pine St., San Francisco, $6,-640, engrs. est. $7,350. Noted Nov. 25.

Calif., Arcadia—Curbing and oil macadam paving, etc. 225,000 sq.ft. Duarte Rd., to A. O. Nelson, 136 North Huntington Dr., Pasadena, $25,790.

Calif., Barnes City—Curbing, walks and concrete paving, etc., Walsh St. and Del Roy Blvd., to G. H. Oswald, 366 East 58th St., $155,000 and $121,000 respectively. Noted Dec. 16.

Calif., Culver City—Vibrolithic concrete paving Sawtelle Blvd., etc., to Braun, Bryant & Austin, 6244 Washington Blvd., Los Angeles, $31,521.

Calif., Huntington Park—Curbing, guttering and 5 in. asphaltic concrete paving Arbutus Ave., etc., to Los Angeles Paving Co., 3200 East Vermont Ave., $29,345.

Calif., La Mesa—Curbing, sidewalks, and asphaltic concrete paving 13,000 sq.yd. Lookout Ave., etc., to R. E. Hazzard Contg.

Constr. News page 415

Streets and Roads (Continued)

Co., 2548 Kettner Blvd., San Diego, $179,282. Noted Nov. 4.

Calif., Los Angeles — Concrete paving, rock and oil surfacing, etc., Hyde Park Blvd., to G. H. Oswald, 366 East 58th St. $234,975, and 73rd St., to W. Liddington, 420 East 60th St. $180,980.

Calif., Los Angeles—Curbing, walks, concrete paving, etc., Cochrane Ave. between 21st and Adams Sts., to Martter & Bock, Los Angeles, $29,091. Noted Dec. 16.

Calif., Los Angeles — Concrete and asphaltic concrete paving, etc., Cimarron St. between Slauson Ave. and 64th St., to G. H. Oswald, 366 East 58th St., $128,840. Noted Dec. 2.

Calif., Los Angeles — Concrete paving, etc., Florence Ave. between Van Ness Ave. and West Blvd., to K. S. Littlejohn, Rives-Strong Bldg., $35,585.

Calif., Los Angeles — Los Angeles Co., curbing, guttering, 6 in. concrete paving 59,692 sq.ft., and 8 in. concrete paving 4,755 sq.ft., etc., Palmdale-Valyermo Rd., to Matich Bros., 1436 West 51st St., approximately $22,500. Noted Nov. 25.

Calif., Martinez—Supervs. Contra Costa Co., grading 72,000 cu.yd. road between Moraga and Lafayette, to J. F. Collins, Stockton, $28,700. Noted Dec. 16.

Calif., Oakland—Grading and vibrolithic concrete paving, etc. Waterhouse, Lyman Rds., etc., to Heafey-Moore Co., 344 High St., $69,546. Noted Dec. 16.

Calif., Oakland—Grading, 2 in. Warrenite on 6 in. concrete paving, etc., 3rd St. between Clay and Union Sts., to California Constr. Co., 58 2nd St., San Francisco, approximately $46,115.

Calif., Ontario—D. B. Wynne, city clk., 5 in. asphaltic concrete paving 250,000 sq.ft. California St., and 12,000 sq.ft. Grove St., to Griffith Co., Los Angeles Railway Bldg., Los Angeles, approximately $42,000. Noted Nov. 11.

Calif., Redwood City—San Mateo Co., 1½ in. Warrenite bitulithic on 4 in. concrete paving 542,900 sq.ft. various streets in Lomita Park, to Municipal Impvt. Co., 1723 Webster St., Oakland, approximately $215,000.

Calif., Riverside — Riverside Co. will grade, etc. 5 mi. highway south of Winchester, by day labor, under supervision O. Ford, road supt. $30,000 appropriated.

Calif., San Diego—San Diego Co., curbing, grading and 1½ in. concrete paving, etc., 74,231 sq.yd. grounds La Mesa Country Club, to R. E. Hazzard Contg. Co., 2548 Kettner Blvd., $166,493.

Buildings — Commercial

Proposed Work

Mass., Amherst—APARTMENT—C. J. King, Greenfield, plans reconstructing block apartment, stores and library buildings, Amity and Pleasant Sts. $250,000. Engineer and architect not selected.

Mass., Belmont — THEATRE — M. M. Provizer, 436 Geneva Ave., Dorchester, having sketches made by H. T. Underwood, 46 Cornhill, Boston, 1 and 2 story and basement, brick and steel, Cushing Sq. $150,000.

Mass., Holden—ARMORY—Town, F. N. Woodman, chn. building com., plans armory. $150,000. Engineer and architect not selected.

Mass., Lynn—TEMPLE—Temple Bethel, H. Yozel, pres., 11 Gray Circle, having revised plans prepared by G. A. Cornet, 10 Central Ave., 1 story and basement, 65 x 80 ft., brick, stone and marble, plain foundation, Breed and Lewis Sts. $150,000. Former bids rejected. Noted Dec. 16.

Mass., Newton (Ind. br. Boston)—HOSPITAL, NURSES HOME and POWER PLANT—Newton Hospital, C. C. Kelsey, pres., having plans prepared by Densmore, LeClear & Robbins, Park Sq. Bldg., Boston, and soon takes bids 5 story and basement, irregular shaped, brick, steel and limestone, plain foundation, Beacon St. $1,500,000.

Mass., Stoughton—THEATRE—Funk & Wilcox, archts., 26 Pemberton Sq., Boston, preparing preliminary plans 1 and 2 story and basement, brick and steel, plain foundation. $150,000 or more. Owner's name withheld.

Conn., Bridgeport—Y. M. C. A., 833 Main St., D. S. Day, chn., having plans prepared by C. W. Walker, 886 Main St., for building, State St. $500,000.

Conn., Hartford — APARTMENT — H. Finman, 1283 Main St., having plans prepared by G. Zunner, 182 High St., 3 story, 90 x 130 ft., brick, steel and stone, Westland St. $160,000.

Constr. News page 416

Conn., Hartford — BUSINESS — Garber, Wiegel & Toretsky, 120 Morgan St., soon lets contract 2 story, 82 x 115 ft., brick, steel and stone, Asylum St. $225,000. Ebbets & Frid, 15 Lewis St., archts.

Conn., Norwalk — Y. M. C. A. having sketches made by May & Hillard, 677 5th Ave., New York City, for Y. M. C. A. building. Noted Nov. 18.

Conn., New Britain—Y. M. C. A., Court and Main Sts., having plans prepared by May & Hilliard, 607 5th Ave., New York City, new building. To exceed $150,000.

N. Y., Binghamton — EMPLOYEES HOME—Dept. Mental Hygiene, Capitol, Albany, takes bids in April, for Binghamton State Hospital, here. S. W. Jones, Capitol, Albany, state archt.

N. Y., Brooklyn—APARTMENT—Wolf Housing Corp., c/o Gronenberg & Leuchtag, archts., 1385 Bway., having plans prepared 5 story, 100 x 100 ft., brick, steel and stone, plain foundation, 62nd St. and 5th Ave. $250,000.

N. Y., New York — APARTMENT — Owner, c/o Glick & Dumas, archts., 400 East Fordham Rd., having plans prepared 9 story, 125 x 300 ft., brick, steel and stone, plain foundation, Gerard Ave. $2,500,000.

N. Y., Ogdensburg—STAFF ACCOMODATIONS—Dept. Mental Hygiene, Capitol, Albany, takes bids probably in February, staff accommodations at St. Lawrence State Hospital, here. S. W. Jones, Capitol, Albany, state archt. Noted Nov. 18.

N. Y., Rochester — STORE — C. Traver, engr., Hiram Sibley Bldg., soon takes bids 2 story and basement, 100 x 130 ft., rein.-con., brick and steel, plain foundation, for Denneston Realty Co., 195 Exchange St. $200,000. Gordon & Kaelber, Hiram Sibley Bldg., archts.

N. Y., Rome—DORMITORY—State Dept. Mental Hygiene, Capitol, Albany, takes bids probably in March, New Dormitory Building "R," and underground connections for State School for Mental Defectives, here. S. W. Jones, Capitol, Albany, state archt. Noted Oct. 28.

N. Y., Theills — DORMITORIES — Dept. Mental Hygiene, Capitol, Albany, takes bids probably in April, adult male dormitories, attendants home and service building, at Letchworth Village, here. S. W. Jones, Capitol, Albany, state archt. Noted Nov. 18.

N. J., Absecon—STORE and APARTMENT—B. V. Smith, archt., Guarantee Trust Bldg., Atlantic City, soon lets contract 3 story and basement, 100 x 130 ft., rein.-con., brick and steel, plain foundation, here, for Freihofer Banking Co., 20th and Indiana Sts., Phila., Pa.

N. J., Newark—HOTEL—Hotel Pennsylvania, Broad and Emmet Realty Co., c/o N. Harris, archt., 790 Broad St., having plans prepared 12 story, brick, steel and stone, plain foundation, Broad and Emmet Sts. $2,500,000.

Pa., Phila.—APARTMENT—G. B. Johnson, archt., 237 North 6th St., soon lets contract 4 story and basement, 130 x 150 ft., brick and steel, plain foundation, Marshall and North East Blvd., for D. M. Elm, 433 North 6th St. $300,000.

Pa., Phila.—APARTMENT—S. Marcus, archt., 5920 Spruce St., preparing plans 12 story and basement, 47 x 90 ft. apartment, Pine and Broad Sts. Owner's name withheld.

Pa., Phila.—GARAGE—J. E. Firldstein, archt., Otis Bldg., making plans 1 story and basement, 80 x 240 ft., rein.-con., brick and steel, plain foundation, Leiper and Frankford Sts., for Stanley Constr. Co., Lincoln Bldg.

Pa., Phila. — OFFICE — N. W. Ayer & Son, 308 Chestnut St., having plans prepared by R. B. Benckert, Bellevue Court Bldg., 8 or 9 story and basement, 103 x 115 ft., rein.-con., brick and steel, plain foundation, 204-12 South 7th St. $1,000,000.

Pa., Phila.—STORE—A. S. Love, Jr., archt., 116 North 22nd St., soon lets contract 4 story and basement, 40 x 115 ft. rein.-con. and brick plain foundation, 2012-14 Chestnut St. Owner's name withheld.

Pa., Phila.—THEATRE and STORE—Ballinger Co., archts., 12th and Chestnut Sts., soon lets contract 1 story and basement, 105 x 137 ft., theatre, and 2 story and basement, 64 x 153 ft. store, both rein.-con., brick and steel, plain foundations, Ridge and Leverington Aves., for Felt Bros., Packard Bldg. Noted Dec. 9.

Pa., Wilkinsburg—STORE and APARTMENT—L. and A. Hunter, Oliver Bldg., Pittsburgh having plans prepared by E. P. Mellon, Oliver Bldg., Pittsburgh, 2 story and basement, 60 x 180 ft., brick, hollow tile and steel, Wood St. and Wallace Ave., here. $150,000.

Md., Baltimore—HOSPITAL—University of Maryland, S. Shoemaker, chn. Bd. Regents. Fidelity Bldg., plans 5 story, irregular shaped, brick and steel addition, plain foundation, Lombard and Green Sts. $300,000. Engineer and architect not selected.

Md., Baltimore — LODGE — Order of Eastern Star, E. H. Williams, pres., 1561 Chestnut Ave., postponed construction 3 story and basement, 75 x 150 ft., brick and steel, plain foundation, 1024 North Charles St. $250,000. H. F. Doeleman, 507 North Charles St., engr. C. N. and N. Friz, Lexington Bldg., archts. Noted Jan. 7.

Md., Baltimore—OFFICE—Real Estate Bd., C. P. Pitt, secy., 7 St. Paul St., plans 5 story, brick and steel, plain foundation, St. Paul and Lexington Sts. $150,000. Engineer and architect not selected.

Md., Cambridge — HOSPITAL—Eastern Shore Hospital, F. Herring, chn. Lunacy Com., 330 North Charles St., plans 3 story, brick and steel addition, plain foundation, $200,000. Engineer and architect not selected.

Md., Towson — AUDITORIUM — Towson Presbyterian Church, R. L. Riddle, pastor, 9 Pa. Ave., postponed construction 1 story and basement, 40 x 116 ft., stone and steel, Chesapeake St. and Highland Ave. $150,000. G. Norbury Mackenzie, Franklin Bldg., archt. Noted Nov. 25.

N. C., Durham — OFFICE — Durham Medical Arts Assn., Inc., plans 8 or 10 story, office building. $300,000. Engineer and architect not selected.

Ga., Atlanta — GARAGE — G. Burnett, Ptree Rd., having plans prepared by A. F. N. Everett, Candler Anx., 1 story and basement, 122 x 202 ft., brick and steel, plain and concrete pile foundation, James and Spring Sts. S. S. Stover, 101 Marietta Bldg., engr.

Fla., Jacksonville — CLUB—Jacksonville Jewish Center plans 4 story and basement, 90 x 100 ft. club, Silver and West 3rd Sts. $250,000. Engineer and architect not selected.

Miss., Biloxi—HOSPITAL—City, c/o R. Z. Welch, supt. City Hospital, having plans prepared by C. Mattes, Biloxi and Gulfport, and takes bids in spring, 4 story and basement, rein.-con. and brick hospital. $225,000. Noted Oct. 7.

Tenn., Knoxville — EXCHANGE and OFFICE — Southern Bell Telephone & Telegraph Co., c/o F. E. Garrett, dist. mgr., having plans prepared by Alger & Alger, Walton Bldg., Atlanta, Ga., 3 story, concrete and steel addition. $150,000.

O., Canton — CITY HALL — City plans new city hall. $300,000.

O., Cincinnati—AUTO SALES— Schott Auto Co., 2414 Gilbert Ave., having plans prepared by Rendigs, Panzer & Martin, 609 Southern Ohio Bank, 1 story and basement, 75 x 175 ft., rein.-con. and brick, plain foundation, Gilbert St. $165,000.

O., Cincinnati — MEMORIAL — War Memorial Assn., 5th and Main Sts., having plans prepared by Garber & Woodward, 1 West 7th St., 1 story, rein.-con. and stone, plain foundation, Highland Ave. $500,000.

O., Cincinnati—OFFICE—Amer. Druggists Fire Insurance Co., Mercantile Library Bldg., having plans prepared by J. G. Steinkamp, Mercantile Library Bldg., 10 story and basement, 82 x 100 ft., brick and rein.-con., plain foundation, Central Ave. $600,000.

O., Cleveland—APARTMENTS—L. Cahn, 2099 Lamberton Rd., had plans prepared by A. F. Janowitz, 811 Prospect Ave., three 3 story and basement, one 101 x 139 ft., 10901 Lake Ave., $225,000, and two 55 x 133 ft., 10003 Lake Ave., $200,000 all brick and steel.

O., Cleveland — APARTMENTS — Marquette Realty Co., 318 West Superior Ave., had plans prepared by L. Soknik, Auditorium Garage Bldg., two 3 story and basement, 37 x 125 ft., and 32 x 90 ft., brick, Milverton Ave. and East 143rd St. $150,000.

O., Cleveland — APARTMENT — K. Zamost & Z. Simon, 6803 Carnegie Ave., having plans prepared by M. Weis, Union Bldg., four 3 story and basement, 34 x 95 ft. each, brick and plain foundations, 1732-82 Alganac Ave. $175,000.

O., Cleveland—EXCHANGE—Ohio Bell Telephone Co., R. Eide, vice pres. and genl. mgr., 4300 Euclid Ave., having plans prepared by F. A. Ward, 4300 Euclid Ave., 2 story and basement, 43 x 80 x 100 ft., brick and rein.-con., West 137th St. and Lorain Ave. $650,000.

O., Cleveland — STOREROOM and OFFICE—Bonar Realty Co., c/o F. P. Price, mgr., 12919 St. Clair Ave., had plans prepared 2 story and basement, 50 x 256 ft., brick and steel, East 101st St. and Carnegie Ave. $150,000. Private plans.

O., Columbus—OFFICE—L. S. MacPhail, pres. Medical Science Building Co., 3rd and Broad Sts., takes bids about Jan. 15. 4 story and basement, 75 x 175 ft., brick and stone, Buttees Ave. and High St. $350,000. J. E. Outcalt, 415 East Broad St., archt.

Buildings—Commercial (Continued)

O., Dayton—Y. M. C. A., 3rd and Ludlow Sts., having plans prepared by Smith-Chamberlain, Commercial Bldg., colored branch Y. M. C. A., 3 or 4 story and basement, brick and rein.-con., plain foundation, incl. gymnasium and swimming pool, West 5th St. $175,000. Noted Apr. 8.

O., East Cleveland (Cleveland P. O.)—APARTMENT—Taylor-Manor Co., c/o J. F. Steffens, archt., Fidelity Mortgage Bldg., Cleveland, had plans prepared 3 story and basement, 45 x 142 ft., brick, 1851 Taylor Rd. $200,000.

O., Troy—HOSPITAL—City, Stouder Memorial Hospital Com., having plans prepared by Schenk & Williams, 3rd Natl. Bank Bldg., 2 and 3 story and basement, brick and stone, plain foundation. $200,000.

Ind., Brazil—HOSPITAL—Comrs. Clay Co., C. J. McCullough, aud., Court House, having plans prepared by Shourds-Stoner Co., 511 Tribune Bldg., Terra Haute, rein.-con., brick and steel hospital. $200,000.

Ind., Indianapolis — STORE — T. A. Moynahan, Ambassador Apts., having plans prepared brick and steel, 27th and Meridian Sts. $150,000. Private plans.

Ind., Lebanon—TEMPLE—Masonic Temple Assn., D. S. Whitacre, secy., having plans prepared by R. F. Daggett, Continental Bank Bldg., Indianapolis, rein.-con., brick and steel temple. $150,000. C. R. Ammerman, Continental Bank Bldg., Indianapolis, engr.

Mich., Detroit — GARAGE — First Natl. Bank, Woodward and Cadillac Sq., had plans prepared by A. Kahn, 1000 Marquette Bldg., 18 story and basement, 700 car capacity, rein.-con., brick and steel, plain foundation, Bates St. $350,000.

Mich., Detroit — OFFICE — Bd. Water Comrs., 176 East Jefferson Ave., plans 6 story and basement, 72 x 150 ft., rein.-con., brick and steel, plain foundation, Jefferson Ave. $800,000. Engineer and architect not selected.

Mich., Pontiac—APARTMENTS—Griggs Co., 22 West Lawrence St., having plans prepared five 3 story and basement, brick and steel, plain foundations, Douglas St. $625,000. Private plans.

Ill., Chicago — APARTMENT — W. B. Eldrid, 1305 Oak Ave., Evanston, having sketches made by F. Stanton, 310 South Michigan Ave., 8 or 10 story and basement, 75 x 150 ft., rein.-con., brick and stone, 6317-19 Kenmore Ave. $600,000.

Ill., Chicago—APARTMENT—A. Krugel & Co., 4865 Bway., soon takes bids 15 story and basement, 100 x 166 ft., rein.-con., brick and stone, Wellington Ave. near Sheridan Rd. $1,500,000. R. F. France & Co., 105 North Clark St., archts.

Ill., Chicago—LABOR TEMPLE—Amalgamated Clothing Workers of America, 409 South Halsted St., having plans prepared by W. W. Ahlschlager, 65 East Huron St., 5 story and basement, 77 x 150 ft., brick and stone, incl. auditorium, library, gymnasium, etc., Ashland Ave. and Van Buren St. $1,000,000. Noted Sept. 2.

Ill., Chicago—OFFICE and STORE—Madison-Clark Building Corp., c/o W. W. Ahlschlager, 65 East Huron St., having plans prepared 23 story and basement, granite, steel, brick and terra cotta, Clark and West Madison Sts. $2,700,000.

Ill., Chicago — OFFICE and STORE — Pancoe Bros., 123 West Madison St., having plans prepared by Hall, Lawrence & Ratcliff, 123 West Madison St., 35 story and basement, 75 x 100 ft., brick, steel and terra cotta, Monroe and Wells Sts. $3,500,000.

Ill., East St. Louis — East St. Louis Y. W. C. A., C. Chandler, secy., 317 Missouri Ave., having preliminary plans prepared by A. B. Frankel, 1st Natl. Bank Bldg., 3 or 4 story and basement, rein.-con., brick and stone, 9th and Ohio Aves. $300,000 up.

Ill., Springfield—OFFICE—Mutual Life Insurance Co., 411 South 5th St., plans 16 story office building. Engineer and architect not selected.

Wis., Chippewa Falls — HOSPITAL — State Bd. Control, A. W. Bagley, secy., Madison, plans 2 or 4 story, rein.-con., brick and steel hospital, plain foundation, at Wisconsin Training School, here. $150,000. Engineer and architect not selected.

Wis., Kenosha—BANK—OFFICE—U. S. Natl. Bank, 213 Market St., having preliminary plans prepared by Childs & Smith, 720 North Michigan Ave., Chicago, Ill., 8 story and basement, brick, stone and concrete, plain foundation. $500,000.

Wis., Madison—ELECTRICAL LABORATORY — University of Wisconsin, J. D. Phillips, bus. mgr., plans brick and steel laboratory, plain foundation. $395,000. Engineer and architect not selected.

Wis., Milwaukee — GARAGE — P. Marzillier, archt., 144 Oneida St., soon lets contract 1 and 3 story, 100 x 120 ft., rein.-con., brick and steel, plain foundation, Grand Ave., for G. W. Browne, Inc., 145 Bway. $100,000-$150,000. Noted Dec. 16.

Wis., Milwaukee—THEATRE—Wolff & Damsthal, archts., 230 Grand Ave., soon lets contract 1 and 2 story and basement, 100 x 150 ft., rein-con., brick and steel, plain foundation, Center and 3rd Sts., for Ajax Realty Co., 230 Grand Ave. $250,000.

Wis., Milwaukee—THEATRE—La Croix & Memmler, archts., 228 3rd St., preparing plans 1 and 2 story and basement, 95 x 120 ft., brick, concrete and terra cotta, plain foundation, 25th and Hopkins Sts. $250,000. Owner's name withheld.

Ia., Des Moines — HOSPITAL — Des Moines General Hospital Co., 603 East 12th St., plans 4 story and basement osteopathic hospital, rein.-con., concrete pile foundation. $400,000. J. P. Schwartz, 401 Liberty Bldg., doctor.

Ia., Des Moines — MEMORIAL, COLISEUM and CIVIC CENTER—Amer. Legion Com., H. H. Polk, chn., 201 Equitable Bldg., plans memorial, coliseum and civic center building. $1,000,000.

Kan., Topeka—CITY HALL—City having sketches made by W. E. Glover, Mulvane Bldg., Topeka, 4 story and basement, 130 x 150 ft., rein.-con. and brick city hall $350,000.

Neb., Westpoint — HOTEL — City Community Club, O. D. Wiser, secy., plans hotel. $175,000.

Mo., Cape Girardeau—HOTEL—Syndicate organizing, c/o E. E. Singleton, 626 Pine St., St. Louis, having plans prepared by Pleitsch & Price, Arcade Bldg., St. Louis, and takes bids probably in January or February, 6 story and basement, 100 room, rein.-con., brick and steel hotel, Bway. and Fountain Sts. $500,000.

Mo., Joplin — THEATRE, etc. — United Scenic Studios, 32 West Lake St., Chicago, Ill., had plans prepared by F. D. Jacobs, 32 West Lake St., Chicago, Ill., and soon takes bids 3 story and basement, 85 x 239 ft., brick, terra cotta and stone, 5th and Virginia Sts., here. $600,000.

Mo., St. Louis—COMMERCIAL—Hadley-Dean Glass Co., 703 North 11th St., sbon takes bids 5 story and basement, 125 x 237 ft., rein.-con. and brick Morgan and 11th Sts. $600,000. Engineer and architect not selected.

Mo., St. Louis—COMMERCIAL—Hadley-Dean Glass Co., 703 North 11th St., making preliminary plans 22 story and basement, 65 x 100 ft., rein.-con. and brick, 11th St. and Lucas Ave. $1,400,000. Engineer and architect not selected.

Mo., St. Louis — COMMERCIAL — St. Louis Bakers Co-operative Assn., 210 Market St., soon takes bids 1 and 2 story and basement, 100 x 200 ft., rein.-con., Theresa St. and Chouteau Ave. Engineer and architect not selected.

Mo., St. Joseph—MAUSOLEUM—Superior Mausoleum Co., Orear—Leslie Bldg., Kansas City, having preliminary plans prepared by C. A. Smith, 800 Finance Bldg., Kansas City, rein.-con., stone and marble, 1,000 crypt mausoleum, here. To exceed $150,000.

Ark., Bentonville — COURT HOUSE — Benton Co., W. R. Edwards, judge, had plans prepared 2 story court house. $200,000. Engineer and architect not announced.

Tex., Childress—BANK and OFFICE—First Natl. Bank plans 5 story, brick, stone and rein.-con. bank. $300,000. Engineer and architect not selected.

Tex., Childress — HOTEL — Arch Nave purchased site and plans 5 story, part basement, rein.-con., brick and tile, plain foundation. $150,000.

Tex., Dallas—STORE and THEATRE—J. F. Smith, Praetorian Bldg., plans store and theatre. $150,000. Engineer and architect selected about Jan. 15.

Tex., Galveston—HOTEL—Jean Lafitte Hotel Co., c/o Shearn Moody, Amer. Natl. Insurance Bldg., soon lets contract 10 story, and basement, 86 x 120 ft., rein.-con., brick, tile, stone and terra cotta plain foundation. $500,000. A. Fraser, c/o 824 Amer. Natl. Insurance Bldg., archt. Noted Dec. 9.

Tex., San Antonio—OFFICE—San Antonio Pub. Serv. Co., c/o E. H. Kifer, vice pres. and genl. mgr., having plans prepared by A. B. and R. M. Ayres, 622 Bedell Bldg., 2 or 3 story, 62 x 150 ft., rein.-con. and brick annex, plain foundation, St. Mary's and Market Sts. $150,000.

Tex., Wichita Falls — CITY HALL and AUDITORIUM — City, W. E. McBroom, secy., soon takes bids and opens same about Jan. 10, 3 story and basement, rein.-con. and steel city hall and auditorium. $500,000. Long & Witchell, 300 American Exch. Bank Bldg., Dallas, and Voelcker & Dixon, 4 Kahn Bldg., archts. Noted Dec. 9.

Okla., Tulsa — OFFICE — McBirney Investment Co., c/o E. W. Siffle, archt., 309 Bank of Commerce Bldg., had plans prepared and takes bids after Jan. 1, 10 story and basement, 50 x 140 ft., rein.-con., terra cotta and brick, plain foundation, 3rd and Main Sts. $400,000. Noted Nov. 11.

Okla., Tulsa—OFFICE—C. W. Day, 502 South Boulder St., takes bids about Jan. 25, 10 story and basement, 60 x 140 ft., rein.-con., brick, steel and stone office building. $800,000. Horner, Wyatt & Roades, 408 Bd. Trade Bldg., engrs. A. M. Atkinson, 218 Midcontinent Bldg., archts.

Okla., Woodward—HOTEL—Baker Hotel Co. having preliminary plans prepared by L. A. Forsythe, Braniff Bldg., Oklahoma City, 3 story and basement, 75 x 180 ft., rein.-con. and brick addition, plain foundation, Main St. $175,000.

Wash., Seattle — THEATRE — Liberty Theatre, c/o United Artists Corp., plans remodeling theatre, here. $150,000.

Wash., Tacoma — APARTMENT — O. F. Volk, 9th and Market Sts., having plans prepared by Sutton-Whitney & Dugan, Rust Bldg., 4 story and basement, 80 x 120 ft., brick and concrete, South 7th and Tacoma Sts. $250,000.

Calif., Bakersfield — HOTEL — Hotel El Tejon having preliminary plans prepared by Stevens & Co., 433 California St., San Francisco, probably rein.-con. addition, Truston Ave. $150,000.

Calif., Eureka — MAUSOLEUM — E. G. McWhinney, et al, plans concrete, stone, steel and marble, with 500 crypts. $250,000.

Calif., Hayward—BANK and OFFICE—State Bank and First Nat'l Bank of Hayward (affiliated) having plans prepared by Hermann Safe Co., Howard and Main Sts., San Francisco, 2 story and basement, 45 x 105 ft., steel and rein.-con., Main and B Sts. $150,000.

Calif., Long Beach—APARTMENT—M. Foster, 335 West Ocean Ave., having preliminary plans prepared by E. Sprout, Pacific Electric Bldg., 6 story and basement, rein.-con., Ocean Ave. To exceed $150,000.

Calif., Long Beach — HOTEL — E. M. Billing & Sons, Enid, Okla., having preliminary plans prepared by W. H. Austin, Pacific Southwest Bank Bldg., 12 story, 60 x 106 ft., steel and rein.-con., Ocean Blvd. $500,000.

Calif., Los Angeles—APARTMENT—M. Kal, c/o W. E. Chadwick, archt., 417 Union League Bldg., had plans prepared 4 story and basement, brick and art stone, Westlake Ave. near 8th St. $150,000.

Calif., Los Angeles—APARTMENT and HOTEL — W. Bruce, archt., 621 Pacific Natl. Bank Bldg., preparing plans 8 and 10 story and basement, 200 x 220 ft., rein.-con., Rodney Dr. near Los Feliz Blvd. $1,250,000. Owner's name withheld.

Calif., Los Angeles — APARTMENT — H. L. Bowen having plans prepared by W. E. Chadwick, 417 Union League Bldg., 4 story and part basement, 60 x 159 ft. apartment, Gramercy Pl. $150,000.

Calif., Los Angeles—JUVENILE HALL—Supervs. Los Angeles Co. soon take bids part 1 and 2 story, 215 x 240 ft., rein.-con., Mission Rd. and Henry St. C. Nourse, Amer. Bank Bldg., San Francisco, archt. Noted Nov. 18.

Calif., Los Angeles — OFFICE and CLASSROOM — J. J. Schumacher, c/o Southwestern University, having plans prepared by A. C. Martin, Higgins Bldg., 7 story, 60 x 150 ft. rein.-con. addition, Hill St.

Calif., Madera—HOTEL—B. Getz, et al, de Young Bldg., San Francisco, plans approximately 6 story fireproof hotel, here. $150,000 or more.

Calif., Oakland — OFFICE — Fairview Properties Corp., L. L. Taylor, mgr., Ray Bldg., had preliminary sketches made approximately 5 story and basement, rein.-con. and steel, 13th Ave. and East 14th St. $250,000. Engineer and architect not selected.

Calif., Pasadena—BANK and OFFICE—First Trust & Savings Bank, and First Natl. Bank, having plans prepared by Bennett & Haskett, Security Bldg., approximately 7 story and basement, Class A construction, Madison and Colorado Sts. $500,000. Noted Dec. 16.

Calif., San Francisco—APARTMENT—A. H. Larsen, archt., 582 Market St., preparing plans 6 story and basement, brick and steel, Grove and Scott Sts. $225,000. Owner's name withheld.

Calif., San Francisco—APARTMENT—Mangels Bros., 445 West Portal Ave., having plans prepared by A. H. Larsen, 582 Market St., 5 story and basement, brick and steel, Hayes St. near Franklin St. $150,000.

Calif., San Francisco — APARTMENT — Thirteen Sixty Jones, Inc., c/o W. E. Schirmer, archt., Thayer Bldg., Oakland, having plans prepared 8 story and basement, Jones and Washington Sts. $150,000 or more.

Constr. News page 417

Buildings—Commercial (Continued)

Calif., San Francisco—GARAGE—Lacey & Vukicevich, Hearst Bldg., having plans prepared by O'Brien Bros., 315 Montgomery St., 4 story and basement, rein.-con., Latham Pl. $200,000.

Calif., San Francisco—STORE and LOFT—J. Pasqualetti, 785 Market St., had plans prepared 6 story and basement, rein.-con., Fremont and Natoma Sts. $150,000. C. Zollner, Humboldt Bank Bldg., engr.

Calif., San Francisco—THEATRE—Clausen & Amandes, archts., Hearst Bldg., prepared plans rein.-con., 21st Ave. and Taraval St. $150,000. Owner's name withheld.

Calif., Santa Maria—THEATRE—L. A. Smith, archt., Film Exch. Bldg., Los Angeles, preparing preliminary plans 5 story, rein.-con. and steel, Bway. and Cypress Sts., here. $150,000. Owner's name withheld. West Coast Theatres, Inc., 988 Market St., San Francisco, lessee.

Calif., Watsonville—HOTEL—Blackmore Investment Co., c/o J. L. Stewart, archt., Claus Spreckels Bldg., San Francisco, having plans prepared part 2 and 3 story, frame and stucco hotel. $250,000.

B. C., Vancouver — HOSPITAL — City, City Hall, having plans prepared by A. J. Bird, City Building Dept., Holden Bldg., and takes bids probably in March, 4 story, rein.-con. and tile, plain foundation, Hospital Grounds, Willow St. and 10th Ave. $750,000. Noted Nov. 25.

Que., Three Rivers—HOSPITAL—Roman Catholic Church plans 4 story, 200 x 300 ft. hospital addition, St. Julie St. $300,000. Engineer and architect not selected.

Ont., Toronto—APARTMENT HOTEL—Ramsay Stewart & Co., Northern Ontario Bldg., having plans prepared by H. G. Holman, Northern Ontario Bldg., 10 story and basement, 100 x 120 ft., rein.-con., brick and steel, plain foundation, Bloor St. and Avenue Rd. $250,000.

Ont., Toronto — HOTEL — G. Wright, Walker House, and E. M. Carroll, Carlsrite Hotel, having plans prepared by Ross & MacDonald, 1 Belmont St., Montreal, Que., and J. M. Lyle, 230 Bloor St. W., 19 story and basement, 110 x 186 ft., rein.-con., brick, marble and steel, plain foundation, King and York Sts. $5,000,000.

Ont., Toronto — THEATRE — Major Theatres Ltd., 1780 St. Clair Ave., W., having plans prepared by H. G. Duerr, Lumsden Bldg., 3 story and basement, rein.-con., brick and steel, plain foundation, Rogers Rd. $150,000.

Bids Desired

Mass., Boston—WAREHOUSE—Sherwin-Williams Co., 11 Stillings St., taking bids altering and constructing 3 story, rein.-con. and brick addition, plain foundation, Pittsburgh St. $150,000. Private plans.

Mass., Norwood—MUNICIPAL—Jan. 10, by Town, Town Hall, 2 story and basement, brick, steel and stone. Washington and Market Sts. $280,000. W. G. Upham, Bigelow Bldg., archt.

Mass., Quincy (br. Boston) — APARTMENT—See "Contracts Awarded."

Mass., Somerville (Boston P. O.)—STORE—F. W. Woolworth Co., Park Sq. Bldg., Boston, taking bids altering and constructing 2 story and basement, brick and stone addition, plain foundation, 260 Elm St. $150,000. E. Grundman, c/o owners, engr. Noted Dec. 16.

Mass., Westboro—BANK—Westboro Savings Bank, M. H. Walker, pres., taking bids 2 story and basement, rein.-con., steel and brick, plain foundation. $150,000. J. W. Beal Sons Co., 185 Devonshire St., Boston, archts. Noted Oct. 28.

Conn., Hartford—SALES and SERVICE GARAGE—See "Contracts Awarded."

N. J., Newark—DEPARTMENT STORE—Jan. 3, by J. Hunt, archt., 30 North Michigan Ave., Chicago, Ill., 16 story, 109 x 141 x 281 ft., brick, steel and stone, plain foundation, Washington, Bank and Halsey Sts., here, for L. Bamberger & Co., Halsey St. $10,000,000. M. C. Schwab, 30 North Michigan Ave., Chicago, Ill., engr. Noted Dec. 23.

Pa., Phila.—BANK and OFFICE—Jan. 10, by Simon & Simon, archts., 249 South Juniper St., 30 story and 3 basement, 175 x 221 ft., rein.-con., brick, steel, limestone and granite, caisson foundation, Broad St. between Sansom and Walnut Sts., for Fidelity Building Corp., c/o Fidelity-Phila. Trust Co., W. P. Gest, pres., 325 Chestnut St. $10,000,000. Noted Jan. 28.

Pa., Phila.—LOFT—Dec. 31, by M. A. Bernhardt, archt., 127 South 16th St., 8 story and basement, 39 x 67 ft., rein.-con. and brick, plain foundation, 120-22 North 7th St., for Southern Bookbindery Co., 120-22 North 7th St.

Constr. News page 418

Fla., De Land—COURTHOUSE—Jan. 3, by Comrs. Volusia Co., fireproof courthouse. W. D. Harper & Co., Daytona Beach, archts. Noted Nov. 11.

Mich., Flint—HOSPITAL—Jan. 19, by Bd. Mgrs. Hurley Hospital c/o City Engineering City Hall, 10 story and basement, 250 bed capacity, rein.-con., brick and steel, plain foundation. $955,000. Thiebar & Fugard, 219 East Superior St., Chicago, Ill., archts. Noted Nov. 25.

Ill., Chicago — HOTEL — Jan. 5, by P. Gerhardt, archt., 64 West Randolph St., Royal Blue Hotel, 8 story, 100 x 153 ft., rein.-con., brick and terra cotta, 4542 Malden Ave., for A. Blau, 2435 Lawrence Ave. $1,100,000.

Wis., Manitowoc—BANK and OFFICE—Manitowoc Savings Bank, South 8th and Jay Sts., taking bids 4 story and basement, 52 x 94 ft., rein.-con., brick and natural stone, plain foundation. $150,000. W. J. Raeuber, Dempsey Bldg., archt. Noted Nov. 11.

Ia., Waterloo — THEATRE — Jan. 5, by J. S. Bartley, archt., 903 Pioneer Blk., 4 to 6 story and part basement, 110 x 141 ft., rein.-con., brick, steel and terra cotta, plain foundation, for Waterloo Orpheum Co. $300,000. Noted Sept. 30.

Mo., St. Louis — HOSPITAL — St. Anthonys Hospital, Grand and Chippewa Sts., taking bids general contract 5 story, attic, and part basement, 58 x 210 ft., rein.-con., brick and stone hospital addition, also 1 story, 24 x 50 ft., brick and concrete garage, Louisiana St. near Chippewa St.; excavation for same, to C. Kunst, 917 Russell Ave.; and foundation, to F. Schirm, 4336 College Ave. Klutho, Danft & Klutho, Syndicate Trust Bldg., archts. Noted Nov. 4.

Tex., Laredo—CLUB—B. P. O. E. Lodge 1018, taking (private) bids 6 story and basement, 110 x 130 ft., rein.-con., brick and hollow tile, plain foundation, Farrugat and Salinas Sts. $350,000. Private plans.

Calif., Los Angeles—APARTMENT—See "Contracts Awarded."

Calif., San Francisco — APARTMENT — See "Contracts Awarded."

Calif., San Francisco — HOTEL — See "Contracts Awarded."

Calif., San Francisco—THEATRE—See "Contracts Awarded."

Bids Received

D. C., Wash.—POLICE STATION—Dist. Comrs., District Bldg., Dec. 22, constructing Police Station 14, from A. L. Smith & Co., 2525 Pennsylvania Ave., $50,950. Noted Dec. 16.

Ia., Mt. Pleasant—MEMORIAL—P. E. O. Society, c/o A. H. Scott, Wichita, Dec. 15, general contract 2 story and basement, rein.-con., steel and stone, from Kucharo Constr. Co., 622 Hubbell Bldg., Des Moines. $96,500.

Calif., Los Angeles—GARAGE—R. H. Orr, archt., Corporation Bldg., 5 story and basement, 90 x 275 ft., rein.-con., 6th St. and Mariposa Ave., from J. C. Bannister, 6331 Hollywood Blvd., approximately $250,000. Noted Dec. 2.

Contracts Awarded

Mass., Boston—BANK—Natl. Shawmut Bank, 40 Water St., altering and constructing 1 story and basement, rein.-con., brick and steel addition, plain foundation, to Horn Bros., 25 Miner St., Boston. Archts. est. $150,000.

Mass., Boston — STORE and APARTMENT—H. O. Apthrop, 60 State St., 5 story and basement, brick and stone, plain foundation, 477 Commonwealth Ave., to A. Livingstone, 6 Woodbine St., Roxbury. Archts. est. $200,000. Noted Nov. 18.

Mass., Quincy (br. Boston)—APARTMENT—Gallagher Constr. Co., 13 Temple St., will build 4 story and basement, 50 x 150 ft., brick, plain foundation, Quincy Shore Reservation. $150,000. Work will be done by separate contracts. Batty & Gallagher, 13 Temple St., archts.

Conn., Hartford—SALES and SERVICE GARAGE—J. P. Nielson & Son, 76 Maple Ave., will build 2 story, 95 x 250 ft., rein.-con. and steel, Washington St. Archts. est. to exceed $150,000. Work will be done by separate contracts. Golden, Storrs & Co., 983 Main St., archts.

N. Y., Albany — OFFICE — Standard Oil Co., 26 Bway., New York City, 8 story office building, Washington Ave., Park Pl. and Lafayette St., here, to Davis Constr. Co., 225 West 110th St., New York City. Archts. est. approximately $350,000.

Pa., Phila.—SALES and SERVICE—Thalheimer & Weiss, archts., 10 South 18th St., 3 story and basement, 60 x 178 ft., rein.-con., and brick, plain foundation, 4718 North Broad St., to W. Zinker Co., 735 Cherry St., for Logan Oakland Motor Co., 4718 North Broad St. Noted Oct. 7.

Pa., Phila.—SALES and SERVICE—Phila. Motor Serv. Co., Columbia St. between Front and Blair Sts., 4 story and basement, 110 x 114 x 145 ft., rein.-con. and brick, plain foundation, here, to G. Kessler Contg. Co., 1733 North Marvine St. Archts. est. $300,000.

Ala., Birmingham — STORE — Henley Estate, 5 story and basement, 50 x 150 ft., rein.-con., concrete pile foundation, 1820 2nd Ave. N., to Foster & Creighton, 4th and 1st Natl. Bldg., $150,000.

Ala., Shelby Springs—HOTEL and CLUB—G. P. Turner, archt., Amer. Trust Bldg., Birmingham, 3 story, 75 x 150 ft., rein.-con. and brick, concrete pile foundation, here, to E. G. Holladay Co., Martin Bldg., Birmingham, for Yamakita Land & Development Co., Birmingham. $250,000.

Miss., Jackson—OFFICE—Capitol First Realty Co., c/o P. Chambers, general contract 10 story, 75 x 175 ft., rein.-con., brick and terra cotta, Pearl and Southwest Sts., to S. W. Leard, P. O. Box 1215, Baton Rouge, La., $248,000. Noted Dec. 16.

Tenn., Memphis — GARAGE — National Garages, Inc., 9 story, concrete tile, brick and steel, North Front and Court Sts., to Gauger-Korsmo Constr. Co., 910-11 Fidelity Bank Bldg. Archts. est. $750,000. Noted Aug. 19.

O., Cincinnati — APARTMENT — Avon Apartment Co., Mercantile Library Bldg., 3 story and basement, brick, plain foundation, Reading Rd., to Avon Constr. Co., Mercantile Bldg., $150,000.

O., Cincinnati — OFFICE — Eureka Fire Insurance Co., 22 West 8th St., 25 story and basement, brick and rein.-con., plain foundation, 8th and Vine Sts., to Foreman & Putnam, Marietta, $2,000,000.

O., Cleveland — APARTMENT — H. Hradilek, archt., 902 Park Bldg., 4 story and basement, 51 x 118 ft., brick, steel and concrete, 3306 Bosworth Rd., to F. R. Valek, 3501 Storer Ave. Archts. est. $150,000. Noted Dec. 9.

O., Cleveland—BANK, STORE, SUITES and OFFICE—H. L. Shupe, archt., 12429 Cedar Rd., 2 story and basement, 60 x 160 ft., brick, steel and concrete, West 130th St., to Griffin-Zimmerman Co., Engineers Bldg., for Lorain St. Savings & Trust Co., J. A. Melcher, pres., Lorain Ave. and Fulton Rd. Archts. est. $150,000. Noted Nov. 18.

O., Columbus—POST OFFICE—J. Culp, Inc., 335 La Salle St., Chicago, Ill., 3 story and basement 100 x 187½ ft., stone and concrete, East Spring St., here, to L. L. LeVeque Co., Edgehill Rd., approximately $300,000. Noted Dec. 2.

O., Dayton — CHILDREN'S HOME — Comrs. Montgomery Co., approximately twenty-five 1 and 2 story, brick and timber buildings for childrens home, Covington Pike, to Wood Constr. & Supply Co., Oxford, $267,000; heating and ventilating, to C. E. Shultz, 221 West 4th St., Dayton, $26,348. Noted Nov. 25.

Mich., Jackson—BANK and OFFICE—Weary & Alford, archts., 1923 Calumet Ave., general contract 13 story and basement, 44 x 120 ft., brick, terra cotta and steel, to Palmer Constr. Co., 310 Grand Rapids Savings Bldg., for Jackson City Bank. Archts. est. $500,000. Noted Oct. 7.

Ill., Chicago — APARTMENT — Kengyle Building Corp., c/o D. S. Klafter, archt., 64 West Randolph St., general contract 7 story and basement, 100 x 150 ft., 5040-48 Kenmore Ave., to Fitzgerald Constr. Co., 105 West Monroe St. Archts. est. $850,000.

Ill., Chicago—APARTMENT—J. Rosenberg, 1209 East 55th St., carpentry contract 3 story and basement, 130 x 264 ft., rein.-con. and brick, Lake Park Ave. near 47th St., to H. Zisook, 1209 East 55th St. Archts. total est. $700,000.

Ill., Chicago — APARTMENT — S. M. Leviton, archt., 160 North La Salle St., masonry, concrete and carpentry contract 6 story and basement, 47 x 125 ft., Roscoe and Paulina Sts., to Lind Constr. Co., 6404 South State St., for S. Gordon, c/o architect. Archts. est. $400,000.

Wis., Kenosha — THEATRE — United Scenic Studios Co., archts., 28 West Lake St., Chicago, Ill., general contract 3 story and basement, 87 x 102 x 264 ft., brick, concrete and terra cotta, plain foundation, Main and Exchange Sts., to Immel Constr. Co., Dana Bldg., Fond du Lac, and excavation for above, sublet to P. Frandsen, 1126 Sellick Ave., Kenosha, for Universal Chain Theatrical Enterprises, 730 5th Ave., New York City, N. Y. Archts. est. $600,000. Noted Oct. 21.

Wis., Milwaukee—THEATRE and STORE—Saxe Amusement Enterprises, 530 Grand

Buildings—Commercial (Continued)

Ave., 1 and 2 story, 150 x 189 ft., rein.-con. brick and terra cottta, plain foundation, 3rd and Locust Sts. to S. M. Siesel Co., 160 Ogden Ave. $660,000. Noted Oct. 21.

Ia., Cedar Rapids—BANK and OFFICE—Cedar Rapids Savings Bank & Trust Co., J. M. Dinwiddie, pres., general contract remodeling and enlarging 8 story and basement, 50 x 140 ft., brick and stone, 3rd Ave. and 3rd St., to Loomis Bros., 318 3rd Ave.; heating and plumbing, to Kubias Co., 413 2nd Ave. Archts. est. $150,000. Noted Dec. 16.

Minn., Duluth — MEDICAL CLINIC — Octagon Investment Co., c/o T. W. Wahl & Co., Lonsdale Bldg., 3 story and basement, 100 x 140 ft., rein.-con. and brick, 2nd St. and 2nd Ave., to Jacobson Bros., Columbia Bldg., $200,000. Noted Oct. 28.

Mo., Cape Girardeau — HOSPITAL — Southeast Missouri Hospital, c/o M. E. Lemming, chn., 3 story and basement, 40 x 137 ft., brick, concrete, steel and stone hospital, here, to A. Gerhardt, Cape Girardeau.

Mo., St. Joseph—OFFICE and STORE—J. H. Cooper, 390 Riverside Dr., New York City, N. Y., 2 story and basement, 63 x 140 ft., rein.-con., brick, steel and terra cotta, here, to W. J. Assenmacher Co., 627 North 17th St., Lincoln, Neb. Archts. est. $150,000. Noted Nov. 18.

Tex., Laredo—HOTEL—A. C. Richter, H. C. Wood and associates, 907 Travis Bldg., San Antonio, Aztec Hotel, 12 story and basement, 110 x 140 ft., rein.-con. and brick, plain foundation, here, to Kelwood Co., 907 Travis Bldg., San Antonio, approximately $275,000. Noted Dec. 9.

Tex., San Antonio — GARAGE and SALES—Central Impvts. & Investment Co., c/o H. E. Mills, engr., c/o S. A. Buick Co., 3rd and Bway. Sts., 3 story and basement, 80 x 140 ft., rein.-con., brick and stone, to W. C. Thrailkill, 706 Builders Exch. Bldg., $117,828 (incl. mechanical work). Noted Dec. 23.

Tex., San Antonio—HOTEL—Clarence Garrett Investment Co., et al, c/o Maverick Bldg., general contract 12 story and basement, rein.-con., brick and tile, plain foundation, Ave. E and 4th St., to L. T. Wright & Co., 910 Builders Exch. Bldg., approximately $275,000. Noted Sept. 2.

Tex., San Antonio—HOTEL—Woodlawn Terrace Hotel Co., c/o P. M. Chamberlain, Exchange Bldg., general contract El Conquistador Hotel (Tourist), 12 story and basement, rein.-con. and brick, concrete pile foundation, Donaldson Ave. and Woodlawn Terrace, to H. N. Jones Constr. Co., 804 Ave. A. Archts. total est. $750,000.

Wash., Seattle — OFFICE — Republic Building Co., 10 story, 108 x 116 ft., rein.-con. and terra cotta, 3rd and Pike Sts., to Murdock & Eckman, Joshua Green Bldg. Archts. est. $750,000.

Calif., Calexico—HOTEL—Calexico Hotel Co., 4 story, 145 x 240 ft., rein.-con. hotel, to Merrill & Rahn, Financial Center Bldg., Los Angeles, $400,000. Noted Dec. 2.

Calif., Laguna Beach—CLUB—Balboa, Laguna Beach & Rock Island Beach & Country Club, c/o 617 Pacific Natl. Bank Bldg., Los Angeles, part 2 to 6 story, rein.-con., here, to Winter Constr. Co., 2404 West 7th St., Los Angeles, exceeding $150,000.

Calif., Los Angeles—APARTMENT—A. Love, c/o L. T. Squires, archt., 410 Washington Bldg., 4 story and basement, brick, South Wilton Pl., to W. Feigenbaum, 269 East Grand View St., Sierra Madre, approximately $150,000.

Calif., Los Angeles—APARTMENT—S. E. Bancroft, 4 story and basement, brick, Kenmore Ave., to McConville & Perryman, 3311 West Washington St., approximately $150,500.

Calif., Los Angeles—APARTMENT—J. Hawley, 6 story and basement, 111 x 188 ft., concrete, North Western Ave., to H. N. Dickerman, 315 West 9th St., approximately $275,000.

Calif., Ocean Park—HOTEL, STORE and APARTMENT—D. Sheridan, 3 story, brick, Main St., to W. Fleming Co., 1918 West 7th St., Los Angeles, approximately $150,000.

Calif., Oroville—HOTEL—C. S. Mabery (owner and general contractor) Ochsner Bldg., Sacramento, will build approximately 5 story, probably rein.-con. hotel here. $200,000 or more.

Calif., Pasadena — TEMPLE—Pasadena Masonic Bldg. Assn., 2 story, rein.-con., South Euclid Ave., to Hogan Co., Northwest Br. Lincoln Ave. Archts. est. $250,000.

Calif., San Francisco—APARTMENT—V. Fassio, 165 Julian St., will build 10 story and basement apartment, Turk St. near Jones St., by day labor and sub-contracts. $300,000. Clausen & Amandes, Hearst Bldg., archts.

Calif., San Francisco—APARTMENT—Lacey & Vukicevich, Hearst Bldg., will build 11 story and basement hotel, O'Farrell St. near Jones St., by day labor. $400,000. Clausen & Amandes, Hearst Bldg., archts. Noted Sept. 5.

Calif., San Francisco—APARTMENT—E. Jose, 251 Kearny St., will build 5 story and basement, rein.-con., Franklin and Vallejo Sts., by day labor. $150,000. H. C. Baumann, 251 Kearny St., archt.

Calif., San Francisco—HOTEL—Vukicevich & Lacey, Hearst Bldg., will build 11 story and basement, steel and concrete, Geary St. near Larkin St., by day labor. $220,000. Clausen & Amandes, Hearst Bldg., archts.

Calif., San Francisco—THEATRE—W. S. King, Hearst Bldg., will build rein.-con., in Mission Dist. $150,000. Private plans.

Calif., San Francisco—WAREHOUSE—Zellerbach Paper Co., 534 Battery St., 4 story, rein.-con., Front and Pacific Sts., to Barrett & Holp, 918 Harrison St., $259,000.

Calif., San Francisco—WAREHOUSE—M. J. B. Co., 665 3rd St., 2 story, 200 x 400 ft., rein.-con., 17th and Mariposa Sts., to Macdonald & Karn, 130 Montgomery St., approximately $350,000.

B. C., Vancouver — THEATRE — J. F. Langer, 553 Granville St., general contract 2 story, 120 x 175 ft., rein.-con., brick and steel, plain foundation, Seymour St., to Northern Constr. Co. Ltd., 736 Granville St., $490,000. Noted Apr. 29.

T. H., Honolulu—Y. M. C. A., 347 Madison Ave., New York City, N. Y., 5 story, brick, steel and stone, plain foundation, here, to Campbell Building Co., Newhouse Blvd., Salt Lake City, Utah, $220,000. Noted Mar. 4.

Buildings—Industrial

Proposed Work

Mass., Arlington—REPAIR, SALES and SERVICE — J. Loud, Park Blvd. Garage Co., 20 Massachusetts Ave., having plans prepared by H. L. Kennedy, 80 Boylston St., Boston, 1 story, rein.-con. and brick addition, plain foundation. $40,000.

Mass., Haverhill — SUB-STATION — Haverhill Electric Co., 121 Merrimack St., having plans prepared by C. H. Tenney & Co., 200 Devonshire St., Boston, brick and steel sub-station. To exceed $40,000.

Mass., Holyoke — REPAIR SHOP and GARAGE—F. Rainault, c/o F. H. Franz, archt., 276 High St., having preliminary plans prepared 1 story, rein.-con., plain foundation, Cabot St. $50,000.

Mass., Oxford — FACTORY — Grosvenor Factory plans rebuilding factory, recently destroyed by fire. $40,000. Engineer and architect not selected.

Mass., Taunton—PLANT—H. O. Rogers Silver Co. plans rebuilding plant, recently partly destroyed by fire. $50,000 or more. Engineer and architect not selected.

R. I., Central Falls — DYE HOUSE — Premier Cement Co. plans rebuilding plant, recently destroyed by fire. $40,000. Engineer and architect not selected.

Conn., Devon (sta. Medford)—POWER STATION—Connecticut Light & Power Co., 107 West Main St., Waterbury, I. W. Day, pres., plans auxiliary power station. $300,000 incl. equipment.

Conn., Hartford—SERVICE and SALES—Packard Motor Car Co., 150 Washington St., soon lets contracts 2 story and basement, 140 x 148 ft., rein.-con. and steel, Washington St. $125,000. Smith & Bassette, 36 Pearl St., archts.

N. J., Fernwood (Trenton P. O.) — FOUNDRY—Duncan Mackenzie's Sons Co., Trenton, plan 2 and 1 story, 60 x 200 ft. foundry. $200,000.

N. J., Newark—WAREHOUSE—Edgecomb Steel Co., 11th and Cambrian Sts., Phila., Pa., plans warehouse, Frelinghuysen Ave., here. $100,000.

Pa., Darby — PLANT — Roberts Filter Mfg. Co. making plans rebuilding filter manufacturing plant, recently destroyed by fire. Private plans.

Pa., Phila.—STEAM STATION—J. T. Windrim, archt., Commonwealth Bldg., soon lets contract 8 story and basement, 94 x 111 ft., rein.-con. and brick, plain foundation, 9th and Willow Sts., for Philadelphia Electric Co., 10th and Chestnut Sts.

N. C., Burlington—TEXTILE PLANT—Alamance Novelty Mills, plans 1 story, 100 loom mill, incl. several cottages for employees. $150,000. M. B. Smith, W. K. Holt, A. G. Holt and S. Love, are interested.

Tenn., Murfreesboro — MILK EVAPORATING PLANT — Carnation Condensed Milk Co., Stuart Bldg., Seattle, Wash., plans plant, here. $500,000.

O., Canton—STORAGE WAREHOUSE—Officials Metropolitan Power Brick Co., Renkert Bldg., plans 1 story, 180 x 530 ft., brick, at Royal plant. $50,000.

O., Chagrin Falls—HEATING PLANT—Bd. Educ., H. B. Pugsley, clk., having plans prepared by A. M. Allen & Co., archts. and engrs., 7016 Euclid Ave., Cleveland, 1 story, brick, steel and concrete centralized heating plant. $40,000.

O., Cleveland—FACTORY—Gogan Machine & Fdry. Co., Inc., 1639 Collamer Ave., plans brick and steel, 1440 East 55th St.

Ind., Rockport — MACHINE SHOP and GARAGE—Montgomery & Parker having plans prepared 2 story, 70 x 165 ft., brick and steel machine shop and garage. $45,000. Private plans. A. R. Fiegel Motor Co., Rockport, lessee.

Mich., Ann Arbor—PRESS—University of Michigan plans 3 story, rein.-con., brick, steel and stone, plain foundation, incl. offices and printing plant, campus. $150,000. Engineer and architect not selected.

Mich., Muskegon — FACTORY — Lakey Fdry. & Machine Co., Water St., having plans prepared rebuilding and enlarging 1 story, steel and timber factory, Water St., recently destroyed by fire. $40,000-$50,000. M. C. Young, c/o owner, engr.

Ill., Springfield—WAREHOUSE, PLANT and OFFICE—Capital City Paper Co., 812 East Adams St.; plans warehouse, plant and office building. Engineer and architect not selected.

Wis., Janesville—BOILER and WELDING SHOP—Schlueter Boiler Wks., 320 North Main St., plans 1 story, 70 x 90 ft., brick and steel, plan foundation, North Main St. $40,000. Engineer and architect not selected.

Wis., La Crosse—WHOLESALE WAREHOUSE—N. Nustad & Co., 124 South Front St., plans 3 story, rein.-con., brick and steel, plain foundation, Main St. $50,000. Engineer and architect not selected.

Wis., Madison — REPAIR SHOP and SERVICE STATION—Central Garage Co., Webster St., plans 1 story, 60 x 200 ft., rein.-con., brick and steel addition, plain foundation. $40,000. Engineer and architect not selected.

Wis., Racine—LAUNDRY—Racine Wet Wash Laundry, 1441 Howe St., plans 1 story and basement, 92 x 120 ft., brick and tile, plain foundation, here. $40,000. Engineer and architect not selected.

Wis., South Milwaukee — FOUNDRY — Stowell Co. plans rebuilding brick and steel foundry, recently destroyed by fire. To exceed $40,000. Engineer and architect not selected.

Ia., Eagle Grove — POWER PLANT — City having plans prepared by H. L. Cory & Co., Aberdeen, S. D., light and power plant. Engineer not announced.

Minn., Minneapolis—FACTORY—Strutwear Knitting Co., 1013-21 6th St. S., J. A. Struthers, pres., plans 2 or 3 story and basement, rein.-con. and brick addition. $175,000. Engineer and architect not announced.

Missouri — FACTORIES — Menzies Shoe Co., S. D. Nichols, pres., 1722 Washington Ave., St. Louis, making preliminary plans three or four 1 story, brick and concrete shoe factories, location not decided. $60,000.

Mo., Neosho—PLANT—Pet Milk Co., Arcade Bldg., St. Louis, having preliminary plans prepared rein.-con. milk condensing plant, here. $500,000.

Mo., St. Louis — CONCRETE POLE PLANT—Marbelite Corp. of America, 3248 Long Beach St., Los Angeles, Calif., having preliminary plans prepared (1st unit) of 6 rein.-con. buildings, fronting Mississippi River, here. $250,000.

Mo., St. Louis—BOX FACTORY—Century Electric Co., 1806 Pine St., soon takes bids 1½ story, 109 x 124 ft., rein.-con., Pine St. near 20th St. Private plans.

Texas — CANNERIES — Best-Clymer Co., 425 West Davis St., St. Louis, Mo., c/o M. G. Clymer, making plans brick and corrugated iron canneries, in Dickinson, Webster and Alvin. Probably purchase all machinery at same time. Private plans.

Tex., Beaumont — GARAGE — Jackson Motor Co., c/o B. D. Jackson, purchased site and having plans prepared 1 or 2 story, 100 x 100 ft., rein.-con., brick and steel addition, Calder Ave. and Pearl St. $70,000. Private plans.

Tex., Beaumont—PLANT—Boykin Mchy. & Supply Co., c/o B. Boykin, pres., purchased site and plans 1 story, 75 x 200 ft., rein.-con. and steel addition, plain foun-

Constr. News page 419

Buildings—Industrial (Continued)

dation, Laurel St. $150,000. Engineer selected soon.

Tex., Brownsville—GARAGE—J. Dennett purchased site and making preliminary plans 2 story, rein.-con. and brick, plain foundation, Adams and 13th Sts. $60,000. Private plans.

Tex., Edinburg—COMPRESS—Aransas Compress Co., c/o J. K. Cain, pres., Corpus Christi, having plans prepared and takes bids about Feb. 1, brick, hollow tile and corrugated iron, plain foundation. $75,000.

Tex., McCamey—REFINERY PLANT—Humble Oil & Refining Co., Humble and Houston, having plans prepared, etc., oil refinery plant, 50,000 bbl. capacity. $300,000. Private plans. Probably take bids furnishing materials and equipment and erecting separately or for jointly furnishing and erecting same.

Tex., San Angelo — STEAM PUMPING STATION — Marland Oil Co. takes bids after Jan. 1, steam pumping station, on Sect. 6, Block 35, near here. $100,000. Private plans.

Tex., Winnsboro — ICE PLANT — East Texas Pub. Serv. Co. had plans prepared by R. H. Oliver, 115 South Dearborn St., Chicago, Ill., 1 story, 60 x 60 ft. ice plant, brick.

Okla., Cushing—REFINERY PLANT—Empire Gas Co. plans rebuilding plant, recently destroyed by fire. $200,000. Private plans.

Okla., Sand Springs—STEEL PLANT—A. G. Herrgene, 303 West 6th St., Tulsa, plans plant, here. $1,000,000. Private plans.

Okla., Seminole—PLANT—Sinclair Oil Co., Sinclair Bldg., Tulsa, had preliminary plans prepared new 1,000 bbl. capacity casinghead gasoline plant with four 250 bbl. capacity casinghead gasoline compressors, here. $75,000. Private plans.

Colo., Loveland—PLASTER MILL—U. S. Gypsum Co., Denham Bldg., Denver, plans enlarging plaster mill, near here. $300,000 appropriated.

Wash., Seattle—SUGAR REFINERY—Seattle Chamber of Commerce plans sugar refinery, 250 ton daily capacity. $2,000,000.

Calif., Berkeley—FACTORY—Peet Bros., and Palmolive Co., 6th and Carlton St., plan factory addition, 6th and Carlton Sts. $40,000 or more.

Calif., Long Beach—POWER PLANT—Southern California Edison Co., 306 West 3rd St., Los Angeles, plans power plant at Terminal Island, here. $60,000,000.

Calif., Los Angeles—FACTORY—Goodyear Tire & Rubber Co., 6701 Central Ave., P. W. Litchfield, pres., plans 5 story, 100 x 200 ft., rein.-con. addition. $250,000. Engineer and architect not selected.

Calif., Sacramento — PACKING PLANT—Libby, McNeil & Libby, Merchants Exch. Bldg., San Francisco, plans 1 story, brick and steel addition, M and 31st Sts. $40,000. Eng. Dept. of Owners, engrs.

Calif., San Leandro—PACKING PLANT—California Packing Corp., 101 California St., San Francisco, had plans prepared 1 story, 60 x 600 ft., brick and frame annex. P. Bush, 101 California St., San Francisco, engr.

Calif., San Luis Obispo—COLD STORAGE PLANT—San Luis Obispo Ice & Cold Storage Co., c/o Hamm, Grant & Bruner, engrs., Ferguson Bldg., Los Angeles, had plans prepared 1 story, 60 x 120 ft., brick and concrete plant.

Calif., San Pedro—CANNING PLANT—Julian Petroleum Corp., 448 South Hill St., Los Angeles, plans canning plant and spur track, here. $50,000. Engineer and architect not selected.

Que., Grand Mere — PAPER MILL — Laureutide Co. Ltd., having plans prepared extending plant. $2,000,000. E. B. Wardle, Grand Mere, engr.

Ont., Arnprior—POWER HOUSE—Town Council plans 3,000 hp. power house and dam, on Madawaska River. $454,168.

Ont., Cochrane—NEWSPRINT MILL—Abitibi Power & Paper Co., Iroquois Falls, having plans prepared 200 ton, concrete, brick and steel mill. $750,000-$1,000,000. Private plans.

Ont., Niagara Falls — FACTORY — Beecham Pill Co. Ltd., England, plans factory, here. $100,000.

Ont., Toronto — POWER HOUSE — Canadian Pacific R.R., Windsor Sta., Montreal, Que., J. M. R. Fairbairn, ch. engr., plans 32 stall capacity engine house, 60 x 120 ft. power house, 70 x 120 ft. machine shop, 100 x 300 ft. twin table for coach repairs with accomodation for 12 coaches, 40 x 200 ft. sleeping, parlor and dining car stores building, 30 x 150 ft. building car department, 100,000 gal. water tank, new yards to accomodate 465 coaches, etc., here. $3,000,000.

N. B., Dalhousie—PAPER MILL—Canadian International Paper Co., Three Rivers, Que., having preliminary plans prepared paper mill, 600 tons daily capacity, here. $10,000,000. A. H. White, 100 42nd St., New York City, engr.

Constr. News page 120

Bids Desired

Mass., Roxbury (Boston P. O.)—SERVICE GARAGE and REPAIR SHOP — Owner, c/o Eisenberg & Feer, archts., 46 Cornhill, Boston, taking bids 1 story, 80 x 220 ft., brick and stone, plain foundation, Waverly St. $45,000.

N. J., Totowa (mail Paterson) — LAUNDRY, etc. — Jan. 7, by C. N. Leathem, State Bldg., Trenton, laundry, power house, recreation building, schools, etc. at Feeble Minded Colony, here, for Bd. Institutions & Agencies, Trenton. $500,000.

Pa., Phila.—LAUNDRY—Jan. 3, by H. M. Wilson, engr., 20 South 15th St., 1 story and basement, 54 x 137 ft., brick, plain foundation, 6th and Lehigh Sts., for Tremont Laundry Co., 629 West York St. Noted Dec. 9.

Pa., Phila.—FACTORY—Jan. 5, by R. E. White, archt., Penn Bldg., 1 and 2 story and basement, 56 x 91 ft., rein.-con., brick and steel, plain foundation, 33rd and Dickenson Sts., for Philadelphia Magnesia Co., 1425 South 8th St.

O., Cleveland—CORE FOUNDRY—Jan. 2, by Christian, Schwarzenberg & Gaede, archts. and engrs., 1900 Euclid Bldg., brick and steel addition, 6565 Bway., for Grabler Mfg. Co., L. Rosenfeld, pres., 6565 Bway. $40,000.

Ill., Chicago—PLANT—See "Contracts Awarded."

Ill., Chicago—FIELD HOUSE—Jan. 19, by South Park Comrs., 57th St. and Cottage Grove Ave., 1 story, 160 x 230 ft. field house, 55th St. and Western Ave. $350,000. L. White, 57th St. and Cottage Grove Ave., archt. Noted Aug. 12.

Wis., Milwaukee — FACTORY — Federal Eng. Co., engrs., 440 Milwaukee St., taking bids 1 story and basement, 62 x 90 ft., brick and concrete addition, plain foundation, Sycamore St., for Bradley Wash. Fountain Co., 2203 Sycamore St. $40,000.

Mo., Kansas City—CONCRETE MIXING PLANT—See "Contracts Awarded."

Contracts Awarded

Mass., Boston—FACTORY—Kane Furniture Co., 740 Washington St., Boston, altering and constructing 3 story, brick addition, 208 Camden St., to White Constr. Co., 11 Beacon St. Archts. est. $50,000.

Mass., Boston—TERMINAL—King Terminal, 50 State St., for Building 7, 4 story and basement, 50 x 105 ft., rein.-con., plain foundation, Elkins St., to W. M. Bailey Co., 88 Broad St. Archts. est. $40,000 or more. Noted Dec. 16.

Mass., Boston—LAUNDRY—J. Coakley, 446 Tremont St., Boston, 3 and 4 story, brick, Tremont St., to Gerry & Northrop, 494 Harrison Ave., Boston. Archts. est. $40,000.

Mass., Framingham — REPAIR SHOP and GARAGE — West Boston Gas Co., 49 Howard St., 1 and 2 story, 85 x 115 ft., brick, to D. E. McIntire, Inc., 74 Broad St., Boston. Archts. est. $50,000. Noted Dec. 2.

Mass., Monson—BOILER HOUSE—A. D. Elles Mills Co., 288 Main St., 1 story, brick, plain foundation, Main St., to F. T. Ley Co., Inc., 230 Boylston St., Boston. Engrs. est. $40,000.

Mass., Watertown — DYEHOUSE — Baileys Cleaners & Dyers, Inc., 30 Washburn St., 1 story, rein.-con., plain foundation, Washburn St., to W. H. Iliffe, 93 North Beacon St. Archts. est. $40,000.

Mass., Willimansett — MANUFACTURING—C. F. Church Mfg. Co., Holyoke, two 1 story, 40 x 170 ft. and 45 x 50 ft. additions, to E. F. Carlson Co., Holyoke. Archts. est. to exceed $40,000.

R. I., Providence — PLANT — Wilson & Co., G. P. Hopkins, pres., Union Stock Yards, Chicago, Ill., 3 story and basement, 40 x 110 ft., rein.-con. and brick, plain foundation, Canal St., here, to E. J. Cross & Co., 82 Foster St., Worcester, Mass. Archts. est. to exceed $40,000. Noted Nov. 11.

N. J., Bayonne—PLANT—Safety Cable Co., Bergen Point, 3 units 1 story, rein.-con., brick and steel, plain foundation, to W. Kidde & Co., Inc., 90 West St., New York City. Archts. est. $250,000.

Miss., Starkville—PLANT—Borden Milk Co., 470 West 128th St., New York City, plant addition, here, to D. D. Thomas & Sons, 463 North Dunlap St., Memphis, Tenn. Archts. est. $40,000.

O., Cincinnati — FACTORY — Goldsmith Metal Lath Co., 3rd and Eggleston Sts., 1 story, 80 x 300 ft., brick and rein.-con., plain foundation, Orient St., to M. Penker & Son, 123 Valencia St., $140,000.

O., Kent—PICKLING PLANT—Lamson & Session Co., c/o J. Jennings, 2188 Scranton Rd., Cleveland, 1 story, 45 x 90 ft., steel and asbestos metal siding, to Ridge Constr. Co., 1969 East 70th St., Cleveland, approximately $40,000.

O., Norwood (Ind. br. Cincinnati)—FACTORY—Chevrolet Co., South Rd., 1 story, 120 x 282 ft., brick, rein.-con., and steel addition, plain foundation, Smith Rd., to Ferro Concrete Co., 3rd and Elm Sts., Cincinnati, $160,000. Noted Nov. 18.

Ill., Chicago—FACTORY—Weidenmiller Die Mfg. Co., E. O. Weidenmiller, secy., 4311 Lincoln Ave., general contract 3 story and basement, 46 x 125 ft., brick and stone, to G. Oscarson, 6524 North Washtenaw Ave. Archts. est. $45,000.

Ill., Chicago—PLANT—Haydite Co., 403 Mutual Bldg., Kansas City, Mo., will build plant for manufacturing Haydite blocks, here, by day labor. $250,000. Private plans.

Wis., Appleton — FACTORY — General Paint Co., H. J. Kahler, pres., 2 story and basement, 40 x 80 ft., brick and timber, plain foundation, to M. Boldt & Sons, 217 Badger Ave. Archts. est. $40,000.

Mo., Kansas City—CONCRETE MIXING PLANT — W. A. Ross Constr. Co., 1921 Bway., will build commercial concrete mixing plant, 25th St., by day labor. $135,000.

Wash., Seattle — FACTORY — Washington Co-operative Egg & Poultry Assn., 4 story and basement, 115 x 158 ft., rein.-con., West John and Elliott Aves., to West Coast Constr. Co., Seaboard Bldg., $164,498. Archts. est. $175,000.

Calif., Los Angeles—BAKING PLANT—4-S Baking Co., 1119 West 25th St., 1 story, 100 x 175 ft., brick, Blake Ave., to H. S. Heineman, 2608 South Figueroa St., $42,000.

Calif., Pismo Beach — CREAMERY — Pismo Beach Creamery, 1 story, brick, to Marriott Constr. Co., Santa Maria, $45,000.

Calif., San Francisco—FACTORY—California Shade Cloth Co., 1710 San Bruno Ave., 1 story, 47 x 129 ft., rein.-con., San Bruno Ave. and Costa Sts., to J. A. Bryant, 185 Stevenson St.

Calif., San Jose—MACHINE SHOPS and GARAGE, etc.—Pacific Gas & Electric Co., 245 Market St., San Francisco, four 1 story concrete and galvanized iron structures, Linden Ave. and Stockton St., to Morrison Bros., 1310 Liberty St., Santa Clara, approximately $62,000. Noted Dec. 2.

Buildings—Educational, Religious

Proposed Work

Vt., St. Albans — ACADEMY — Bellows Free Academy Fund, S. E. Royce, chn. trustees, plans academy, Bellows Estate. $150,000 or more. Engineer and architect not selected.

Mass., Everett (br. Boston)—SCHOOL—Our Lady of Grace Roman Catholic Church, T. J. Walsh, pastor, 56 Nicholas St., plans brick and stone, 190 Nicholas St. $150,000. Engineer and architect not selected.

Mass., Lynn — SCHOOL — City, School Com., City Hall, plans 2 story and basement, brick addition, Tilnett Ave. $150,000. Engineer and architect not selected.

Mass., Paxton—SCHOOL—Town, School Com., Town Hall, having plans prepared by C. R. Hoyle, 590 Main St., Worcester, and takes bids in spring 2 story and basement, brick and steel grade and high school. $150,000. Noted Oct. 7.

Mass., Sandwich — SCHOOL and AUDITORIUM — Town, School Building Com. plans school and auditorium. To exceed $150,000. Engineer and architect not selected.

Mass., Woburn—CHURCH—St. Charles Parish, J. P. Gorham, having preliminary plans prepared by W. B. Colleary, 80 Boylston St., Boston, altering and constructing 1 story and basement, brick and stone addition, plain foundation. $150,000.

R. I., Central Falls—SCHOOL—City, J. J. Doyle, chn. com., plans 2 story and basement, brick and stone, West Side Dist. $150,000. Engineer and architect not selected.

Conn., Haddam—SCHOOL—Town, Bd. Selectmen, Town Hall, plans manual training, trades and useful arts school known as James S. Ray and Mary Gates Ray Memorial. $500,000. Engineer and architect not selected.

N. Y., Helmuth—STAFF ACCOMMODATIONS and NURSES HOME—Dept. Mental Hygiene, Capitol, Albany, takes bids in February, staff accommodations, and prob-

Buildings—Educational, Religious (Cont.)

ably in March for nurses home, at Gowanda State Hospital, here. S. W. Jones, Capitol, Albany, state archt. Noted Nov. 18.

N. Y., Pittsford—SCHOOL—J. P. Flynn, archt., 217 East Ave., takes bids in March or April, 3 story and basement, 60 x 120 ft., brick and steel, plain foundation, East Ave., for Sisters of St. Joseph. $300,000.

N. Y., Syracuse—CHURCH—Church of Most Holy Rosary, G. S. Mahon, pastor, 1107 Bellevue St., making tentative plans steel and stone church, Bellevue and Roberts Sts. $200,000. Engineer and architect not selected.

Pa., Phila. — MUSEUM — University of Pennsylvania, 34th and Spruce Sts., having revised plans prepared by Stewardson & Page, 315 South 15th St., and Day & Klauder, Franklin Bank Bldg., museum addition. Noted Nov. 25.

Md., Baltimore—DENTISTRY SCHOOL—University of Maryland, S. Schoemaker, chn. Bd. Regents, Fidelity Bldg., having plans prepared 6 story, irregular shaped, brick and steel, plain foundation, Lumbard and Greene St. $500,000. Engineer and architect not selected.

La., Winnfield—SCHOOL—Winn Parish, S. S. Sikes, supt., plans election $250,000 bonds, 3 story, brick, concrete and stone school. Engineer and architect not selected.

O., Bellevue—SCHOOL—Bd. Educ. having sketches made by Millott & Parker, Bliss Bldg., Sandusky, 3 story, 148 x 169 ft., brick and concrete school.

O., Cincinnati—MUSIC HALL—Music Hall, Elm St., having plans prepared by Kruckemeyer & Strong, 404 St. Paul Bldg., remodeling present 1 story, brick and rein.-con., Elm St. $600,000.

O., Cleveland — CHURCH — St. Johns Hungarian Greek Catholic Church, E. Tabakovich, pastor, 2779 Ambler Ave., plans brick and steel church, Buckeye Rd. and Ambler Ave. $200,000. Engineer and architect not selected.

O., Dayton—LIBRARY—University of Dayton having plans prepared by H. Germann, Miami Savings Bldg., 2 story, brick, stone and rein.-con., campus. $150,000.

O., Gibsonburg—HIGH SCHOOL—Voted $175,000 bonds, high school.

O., Kent—DORMITORY, ART BUILDING, etc.—Bd. Trustees, Kent Normal School filed requests with Ohio Budget Comn. for appropriation, $300,000 for Womans Dormitory, $275,000 Art Building, $140,000 remodeling administration building, $40,000 home for president, $90,000 remodeling Merrill Hall, $30,000 remodeling Moulton Hall, $108,000 addition and roof for Lowry Hall, also $103,000 training school equipment.

O., Swanton—SCHOOL—Plans new school. $160,000.

Ind., Indianapolis — HIGH SCHOOL — School Comrs., 150 North Meridian St., having preliminary plans prepared rein.-con., brick and steel addition to Arsenal Technical High School. $700,000. Engineer and architect not selected.

Ind., Indianapolis — NURSES HOME — James Whitcomb Riley Memorial Hospital Assn., West Michigan St., having preliminary plans prepared by R. F. Daggett, 922 Continental Bank Bldg., rein.-con., brick and steel West Michigan St. $500,000.

Ind., Indianapolis — SCHOOLS — School Comrs., 150 North Meridian St., making preliminary plans Grade School 84, East 57th St. between Delaware and Bway. $183,700, School 73, 13th and School Sts. $141,750, School 85, Arlington and Oak Aves. $157,500, School 43, Capitol and 40th Sts. $84,000, School 47, 1240 West Ray St. $94,500, and School 62, Wallace and 10th Sts. $54,600, all rein.-con., brick and steel. Engineer and architect not selected.

Ind., Muncie — CHURCH — Normal City Methodist Church, A. Pittinger, pastor, having preliminary plans prepared by Houck & Smenner, 108 East Washington St., rein.-con., brick and stone, College Ave. $150,000.

Mich., Detroit—CHURCH and SUNDAY SCHOOL—Minde Methodist Church, Grand River and Beverly Aves., having plans prepared by A. R. Morrison, 2231 Park Ave., 3 and 4 story and basement, 100 x 120 ft., rein.-con., brick and steel, plain foundation, West Chicago Blvd. Noted July 8.

Mich., Detroit — HIGH SCHOOL — Bd. Educ., 1354 Bway. Ave., having plans prepared by Malcolmson & Higginbotham, 1217 Griswold St., 3 story and basement, rein.-con., brick and steel addition to Eastern High School, plain foundation, East Grand Blvd. $495,500.

Mich., Flint — HIGH SCHOOL — Bd. Educ. having plans prepared by Malcolmson & Higginbotham, Flint Office, for Junior High School, 2 story and basement, 1,600 seating capacity, rein.-con., brick and steel, plain foundation, Mackin Rd. $750,000.

Mich., Roseville — SCHOOL — Bd. Educ. Dist. 5, Macomb Co., had plans prepared by Verner, Wilhelm & Molby, 824 Book Bldg., 2 story and basement, rein.-con., brick and steel, plain foundation, Melvin Ave. $150,000.

Wis., Green Bay—HIGH SCHOOL—Bd. Educ., I. H. McIntyre, supt. schools, soon takes bids 1 story and basement, 78 x 123 ft., brick, tile and concrete addition for auditorium. $150,000. Foeller & Schober, Nicollet Bldg., archts.

Wis., Kenosha—HOME for AGED—Carmelite Sisters, 168 Kavanaugh Pl., Wauwatosa, having preliminary plans prepared by LaCroix & Memmler, 228 3rd St., Milwaukee, 2 story and basement, brick and concrete home for aged. $150,000. Noted Dec. 16.

Wis., Whitewater—HIGH SCHOOL—Bd. Educ., A. R. Page, supt. schools, having preliminary plans prepared by E. J. Hancock, Lacock Bldg., Eau Claire, 2 story and basement, 112 x 150 ft., brick, tile and concrete, plain foundation. $170,000. Noted Nov. 11.

Ia., Ames — DORMITORY — Iowa State College having preliminary plans prepared by Proudfoot, Rawson & Souers, 810 Hubbell Bldg., Des Moines, 3 story men's dormitory, rein.-con., brick and stone, on campus. $150,000.

Minn., Mankato — SCHOOL — Bd. Educ. plans probably 3 story and basement, rein.-con. and brick school. $300,000. Engineer and architect not announced.

Kan., Kansas City—NURSES HOME and HOSPITAL—Kansas University Medical School, W. Y. Morgan, pres. Bd. Regents, plans 5 story nurses home, and 4 story ward addition, rein.-con. 40th and Hudson Sts. $600,000. Engineer and architect not selected.

Neb., Cozad—HIGH SCHOOL—Election in spring, $150,000 bonds, 3 story and basement, rein.-con. and brick, for Bd. Educ. A. D. Baker, Clintic Bldg., Grand Island, archt. Noted Aug. 26.

Mo., St. Louis—SCHOOL—Bd. Educ., 911 Locust St., having plans prepared by R. M. Milligan, comr. c/o owner, and soon takes bids (central portion incl. 10 classrooms, kindergarten, etc.) 2 story and part basement, rein.-con., brick and limestone, Kingshighway and Penrose St. $260,000. Total $340,000.

Tex., Laredo—COLLEGE—Ursuline Convent, Catholic Church having plans prepared 4 story, rein.-con., brick, stone, and tile, plain foundation. $260,000. Private plans.

Tex., Sherman — ADMINISTRATION — Kidd-Key College having plans prepared by Clyce & Rolfe, 306 Commercial Bank Bldg., 3 story, 132 x 188 ft., brick, stone and rein.-con. administration building. $175,000.

Tex., Plainview — DORMITORY — Wayland Baptist College had plans prepared by E. F. Rittenberry, 303 Blackburn Bldg., Amarillo, 2 story, 80 x 200 ft., rein-con., brick and tile, plain foundation. $150,000.

Wash., Longview—SCHOOL—Bd. Educ. takes bids in spring 3 story, rein.-con., brick and stone addition, Olympic St. $300,000. W. B. Ittner, 911 Locust St., St. Louis, Mo., archt. Noted Nov. 4.

Ore., Mt. Angel—COLLEGE—Mt. Angel College, Yeon Bldg., Portland, having plans prepared by R. Barrett, Pittock Blk., Portland, 3 story, 100 x 210 ft. school, here. $300,000.

Calif., Beverly Hills—SCHOOL—Beverly Hills School Dist. having plans prepared by Austin & Ashley, Chamber of Commerce Bldg., Los Angeles, and W. A. Hudson, associated archt., Beverly Hills, school buildings. $280,000 available. Noted Dec. 2.

Calif., Glendale—HIGH SCHOOL—City purchased site and plans high school, on Gardner Tract. To exceed $150,000.

Calif., Los Angeles—CHURCH—Allison & Allison, archts., Hibernian Bldg., soon take bids 3 story and basement, 115 x 150 ft., rein.-con., art and cast stone, 8th St., for 1st Unitarian Church. $200,000. Noted Oct. 14.

Calif., Los Angeles — DORMITORY — Southern California Bible College had plans prepared by H. Cross, Metropolitan Bldg., 3 story, 115 x 195 ft., frame and stucco dormitory. $150,000.

Calif., Los Angeles—HIGH SCHOOL—City of Los Angeles School Dist. having plans prepared by Jeffrey & Schaefer, Kerkoff Bldg., Franklin High School, rein.-con. and brick, incl. auditorium. $200,000.

Calif., Los Angeles—SCHOOL—City of Los Angeles School Dist. having plans prepared by Walker & Eisen, Western Pacific Bldg., Thomas A. Edison School, fireproof. $150,000.

Calif., Los Angeles—UNIVERSITY—J. J. Schumacher, pres. Southwestern University, Hill St. between 10th and 11th Sts., having plans prepared by A. C. Martin, Higgins Bldg., 7 story, 60 x 150 ft. addition. $200,000.

Calif., Oakland—HIGH SCHOOL—City of Oakland School Dist. had plans prepared by E. G. Bangs, 360 17th St., for Junior High School, 2 story and basement, rein.-con., incl. auditorium, etc., 26th and Harrison Sts. To exceed $150,000.

Calif., Pasadena—HALL of HUMANITIES—California Institute of Technology plans hall of humanities building. To exceed $500,000.

Calif., Pittsburg — HIGH SCHOOL — Pittsburg High School Dist. having plans prepared by Stone & Warner, 337 17th St., Oakland, fireproof high school. $225,000 bonds voted for same.

Calif., Riverside—HIGH SCHOOLS—Bd. Supervs. Riverside Co. sold $850,000 bonds, 3 high schools, Marston, Van Pelt & Maybury, 617 West 7th St., A. W. Reo & C. E. Garstang, Pacific South West Bank Bldg., and Austin & Ashley, Chamber of Commerce Bldg., all of Los Angeles, archts.

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Constr. News page 421

Buildings—Educational, Religious (Cont.)

Calif., San Francisco—HIGH SCHOOL—City and San Francisco Co. having preliminary plans prepared by J. Reid, Jr., City Hall, for Sunset Dist. High School. To exceed $250,000.

Calif., San Francisco—HIGH SCHOOL—City and San Francisco Co. had plans prepared by Stone & Joseph, New Call Bldg., Junior High School, 1 and 2 story, rein.-con., Burrows St. $400,000.

B. C., Vancouver—SCHOOLS—Bd. School Trustees, Hamilton and Dunsmuir Sts., having plans prepared by F. A. A. Barrs, c/o owner, and takes bids latter part January. 3 story, 17 room and 1 story, 27 room, rein.-con. and brick, plain foundations. $400,000. Noted Nov. 18.

Bids Desired

Mass., Dartmouth — HIGH SCHOOL — Town, School Building Com., taking new bids 2 story and basement, 70 x 180 ft., brick and stone, plain foundation. To exceed $150,000. Former bids rejected. Noted Dec. 16.

Miss., Tupelo—SCHOOL—Jan. 20, Board Trustees Tupelo Separate Dist., S. P. Clayton, pres., and Board Aldermen, school for white children. B. Price, Age-Herald Bldg., Birmingham Ala., archt. Noted Nov. 18.

Fla., Tallahassee—COLLEGE—Jan. 17, by Florida State Bd. Control, 4 story, 180 x 200 ft., rein.-con. and timber, plain foundation, at State College for Women. $450,000. R. Weaver, Gainsville, archt.

O., Hartville — SCHOOL — Jan. 4, by Stark Co. Bd. Educ., 2 story and basement school. $150,000. R. Ridley, Federal Oil & Gas Bldg., Akron, archts.

O., Portsmouth—SCHOOL—Jan. 21, by Bd. Educ., and Devoss & Donaldson, archts., Portsmouth, brick and concrete, 11th St. $140,000. Noted Sept. 9.

Ind., Indianapolis—HIGH SCHOOL—Jan. 21, (extended date), by School Comrs., 150 North Meridian St., Shortridge High School, rein.-con., brick and steel, 34th and Meridian Sts. $1,200,000. J. E. Kopf & Deery, 402 K. of P. Bldg., archts. This corrects report in Dec. 23 issue. Noted Dec. 23.

Mich., East Grand Rapids (mail Grand Rapids)—SCHOOL—Jan. 24, by W. S. Beadle, supt. Schools, 2 story and basement, rein.-con., brick and steel, plain foundation, Dist. 3, for Bd. Educ. $175,000. B. E. Parks & Son, 231 Kelsey Bldg., Grand Rapids, engrs. Robinson & Campau, 715 Michigan Trust Bldg., Grand Rapids, archts.

Mich., L'Anse—HIGH SCHOOL—F. E. and G. F. Parmelee, archts., Iron Mountain, taking bids and open same about Jan. 15, 2 story and basement, 160 x 180 ft., rein.-con., brick, steel and stone, plain foundation, here, for Bd. Educ. $300,000. Noted Oct. 7.

Mich., Owosso—SCHOOL—/. DesRosiers, 620 McKerchey Bldg., taking bids and open same about Jan. 12, 2 story and basement, rein.-con., and brick, plain foundation, for St. Paul Catholic Church. $150,000.

Tex., McAllen — HIGH SCHOOL — Bd. Educ. taking bids and open same about Jan. 7, 3 story, 125 x 200 ft., rein.-con., brick and stone, plain foundation. $200,000. R. H. Cameron, 1116 City Natl. Bank Bldg., San Antonio, archt. Noted Dec. 9.

Calif., Eagle Rock—CHURCH, AUDITORIUM and SUNDAY SCHOOL—See "Contracts Awarded."

D. C., Wash.—HIGH SCHOOL—Jan. 7 (extended date), by Dist. Comrs., District Bldg., addition to Langley Junior High School. Noted Oct. 7.

Bids Received

Mass., Shrewsbury — SCHOOL — Town, S. H. Shepard, chn. com., 2 story and basement, 72 x 105 ft., brick and tile, concrete foundation, South Quinsigamond Ave., from C. Rocheford, 58 Front St., Worcester, $72,300. Noted Dec. 2.

Wis., Racine — HIGH SCHOOL — A. H. Schaefer, secy. Bd. Educ., Dec. 16, William Horlick High School, 2 and 3 story and basement, rein.-con. and brick, Southside, from W. Christensen & Co., 1135 Mound Ave., $416,661. Noted Dec. 9.

Calif., Berkeley—HIGH SCHOOL—J. J. Donovan, archts., Tapscott Bldg., Oakland, general contract (1st unit) 2 story and basement, brick and concrete, here, from J. P. Brennan, Redding, for St. Marys College High School, Oakland. Approximately $203,000. Noted Dec. 9.

Calif., Santa Barbara—SCHOOL—Santa Barbara School Dist., general contract 2 story, rein.-con., Modoc Rd., from W. J. Ochs, 405 Clark St., Fresno, $214,873; heating system, from W. H. Picard, 5656 College Ave., Oakland, $26,833.

Constr. News page 422

Contracts Awarded

Mass., Boston—LABORATORY—Harvard University, c/o Stevens & Lee, archts., 45 Newbury St., 2 story and basement, 45 x 75 ft., brick and stone addition, plain foundation, Forest Hills Sect., to Curtis & Swift, Inc., 80 Boylston St. Archt. est. $150,000. Noted Nov. 18.

Mass., Somerville (Boston P. O.) — HOME — Somerville Home for Aged, 75 Boston St., 3 story and basement, 75 x 185 ft., brick, plain foundation, 117 Summer St., to F. B. Locatelli, 46 Cornhill, Boston. Archts. est. $150,000. Noted Dec. 16.

Mass., Swampscott — CONVENT — St. John the Evangelist, G. A. Readon, pastor, 2 and 3 story and basement, brick, plain foundation, Humphrey St., to Mack Constr. Co., 53 State St., Boston. Archts. est. $150,000 or more. Noted Dec. 2.

Mass., West Roxbury (Sta. Boston)—SCHOOL—City, Schoolhouse Dept., 1 story and basement, brick and limestone, plain foundation, Robert Gould Shaw Dist., Wren St., to Phandor Co., 18 Tremont St., Boston, $92,454. Noted Dec. 2.

N. Y., Springfield (Jamaica P. O.)—SCHOOL—Bd. Educ., 500 Park Ave., New York City, general contract P. S. 132, 218th St., here, to Hayson Constr. Co., 47 West 34th St., New York City, $465,800. Noted Dec. 2.

Pa., Indiana — GYMNASIUM — Indiana State Normal School, J. H. Keith, prof., 1 story and basement gymnasium, here, to Columbia Constr. Co., Harrisburg. Archts. est. $150,000. Noted Nov. 11.

Pa., Phila.—SCHOOL—St. Joachins Parish, c/o J. B. Dever, pastor, Penn and Church Sts., 3 story and basement, 60 x 121 ft., rein.-con., brick and steel, plain foundation, here, to B. J. McKenna, 2643 North Hutchinson St. Archts. est. $175,000. Noted Dec. 9.

O., Cleveland—SCHOOL—Bd. Educ., F. G. Hogen, dir., East 6th St. and Rockwell Ave., altering and constructing 2 story, brick and steel addition, to Schrader Constr. Co., Auditorium Garage Bldg., $192,000. Noted Dec. 2.

Ind., Osgood — HIGH SCHOOL — School Trustees, Center Twp., Ripley Co., general contract rein.-con., brick and steel, to H. F. Vahle Constr. Co., New Palestine; heating and ventilating, to H. Hicks, North Vernon. Archts. est. $150,000.

Mich., Adrian — SCHOOLS — Bd. Educ., three 2 story and basement, rein.-con., brick and steel, plain foundations, to De Wright Bros. Constr. Co., Kalamazoo, approximately $240,000. Noted Nov. 11.

Mo., Kansas City—SCHOOL—Bd. Educ. general contract, 3 story and basement, 83 x 130 ft., rein.-con. and brick, 71st and Olive Sts., to Miller-Stauch, Ry. Exch. Bldg., $110,990; also heating and plumbing, to U. S. Eng. Co., 914 Campbell St., $25,460. Noted Oct. 21.

Calif., Eagle Rock—CHURCH, AUDITORIUM and SUNDAY SCHOOL—Eagle Rock Methodist Church will build 3 story, rein.-con. sunday school building, and 1 story, brick and concrete auditorium with tower, by day labor. To exceed $200,000. A. G. Lindley, Amer. Bank Bldg., Los Angeles, archt.

Calif., San Francisco — SCHOOL — Bd. Pub. Wks., general contract Sherman School, fireproof, Union St., to Mahony Bros., Flood Bldg., for City and San Francisco Co. $262,400. Noted Dec. 23.

Ont., Kingston—NURSES HOME—Kingston General Hospital, general contract, 3 story and basement, rein.-con., brick, and steel, plain foundation, O'Kill and George Sts., to Dickie Constr. Co. Ltd., 17 Yorkville Ave. Archts. est. $150,000.

Federal Government Work

Proposed Work

Me., Caribou—Post Office—Treas. Dept. at office Supervising Archt., Wash., D. C., rejected bids Nov. 30, constructing U. S. Post Office, here. Noted Dec. 9.

Mass., Bedford — Hospital — U. S. Veterans Bureau, Arlington Bldg., Wash., D. C., F. T. Hines, dir., takes bids in January, 20 buildings, U. S. Veterans Hospital group, here. Noted May 20.

Mass., Newburyport—Post Office—Treas. Dept. at office Supervising Archt., Wash., D. C., rejected bids Dec. 2, 1 story and basement post office, here. Noted Dec. 9.

Mass., Southbridge—Post Office—Treas. Dept., at office Supervising Archt., Wash., D. C., rejected bids Dec. 3, 1 story, brick and stone post office, here. Noted Dec. 9.

N. Y., Syracuse — Post Office — Treas. Dept., at office Supervising Archt., Wash., D. C., takes bids after Jan. 1, 100 x 180 ft. post office, Franklin, Erie and West Genessee Sts. $400,000. Noted Sept. 30.

Ia., Iowa City—Post Office—Treas. Dept. at office Supervising Archt., Wash., D. C., rejected bids 20 x 60 ft. post office extension, here. Noted Oct. 21.

Wash., Tacoma — Hospital, etc. — Constructing Quartermaster south of Camp Lewis, takes bids about Jan. 1, hospital, at Camp Lewis, here, $253,000; also plans officers quarters $72,000, non commissioned quarters $30,000, and barracks $800,000, total appropriation $1,155,000. Noted Sept. 2 under "Wash., D. C."

Calif., San Francisco—Pump—U. S. Engineer Office, 2nd Dist., 85 2nd St., cancelled bids to have been opened Jan. 5, 20 in. booster pump, etc. Noted Dec. 16.

Bids Desired

D. C., Wash.—Retaining Walls, etc.—Jan. 18, by U. S. Veterans Bureau, Arlington Bldg., retaining walls and grading at U. S. Veterans Hospital 32, Mt. Alto, here. C. H. Tripp, ch. Constr. Div.

D. C., Wash.—Scout Cruisers, etc.—Mar. 10, by Navy Dept., C. D. Wilbur, secy., constructing Scout Cruisers 26, 27 and 28; also separate proposals for main turbines and gears for said vessels; adv. E. N.-R. Dec. 30.

Minn., Fort Snelling (br. St. Paul)—Tank and Tower—Jan. 11, by U. S. Veterans Bureau, Arlington Bldg., Wash., D. C., steel water tank on tower, at U. S. Veterans Hospital, here.

Calif., San Diego—Buildings—Jan. 19, by Bureau Yards & Docks, Navy Dept., Wash., D. C., storage and shop buildings at Naval Operating (Destroyer Base), here.

Bids Received

Md., Annapolis—School and Deferrization Plant—Spec. 5308 and 5294—Bureau Yards & Docks, Navy Dept., Wash., D. C., Dec. 22, alterations to post graduate school, from B. H. B. Ennis, Jr., Harford Rd. and Gibbons Ave., Baltimore, $4,764; and deferrization plant at Marine Barracks, Naval Academy, from Virginia Mchy. & Wells Co., 1319 East Main St., Richmond, Va., $5,300. Noted Dec. 16.

Tex., Port Aransas—Repairs—U. S. Engineer Office, Galveston, Dec. 8, repairing jetties and submerged spurs, here, from C. Clarke, Guaranty Bldg., Galveston, $113,414. Noted Nov. 18.

Contracts Awarded

Conn., Branford — Post Office — Treas. Dept. at office Supervising Archt., Wash., D. C., reconstructing U. S. Post Office, here, to Agostini Bros., Arcade Bldg., Norfolk, Va., $57,500. Noted Dec. 16.

New Jersey—Removing Dredge—U. S. Engineer Office, Wilmington, Del., removing sunken Dredge 5, of Delaware Dredging Co. from Barnegat Bay, 1 mi. above Mantoloking Bridge coast of New Jersey, to E. J. Cottrell, Highlands, $5,200. Noted Nov. 11.

N. J., Montclair — Post Office — Treas. Dept. at office Supervising Archt., Wash., D. C., brick and stone post office here, to J. Tevss, 116 West 20th St., Norfolk, Va., $147,953. Noted Dec. 2.

Ala., Birmingham — Additional Story — Treas. Dept. at office Supervising Archt., Wash., additional story at U. S. Post Office, here, to Devault & Deitrick, Massilon Rd., Canton, O., $347,500. Noted Dec. 16.

La., New Orleans—Earthwork—U. S. Engineer Office, Burdette St., levee work in 4th Mississippi River Dist., to Ogden & Lewis, Inc., Baton Rouge, $21,401. Noted Nov. 25.

Ky., Louisville—Unwatering Lock Chamber—U. S. Engineer Office, Box 72, unwatering lock chamber during erection of gates at Lock 47, Ohio River, to U. G. I. Contg. Co., Broad and Arch Sts., Phila., Pa., $32,535. Noted Nov. 11.

O., Cincinnati—Engine, etc.—U. S. Engineer Office, 405 Custom House, engine and dredging pump for pipe line dredge "Indiana" to Morris Machine Wks., Baldwinsville, N. Y., $11,660. Noted Nov. 11.

Unclassified

Proposed Work

Seawall — Winthrop, Mass. — Town, Bd. Selectmen plans seawall around outside shore of Cottage Hill. $75,000. Engineer not selected.

Unclassified (Continued)

Memorial—Hartford, Conn.—Dept. Parks plans Frederick K. Fox Memorial, probably stone bridge over Park River, in Bushnell Park. $25,000. E. K. Mitchel, 57 Gillett St., com. Engineer not selected.

Grade Crossing Elimination—Cincinnati, O.—See "Streets and Roads."

Swimming Pool — Dayton, O. — See "Buildings—Commercial."

Transmission Line—Missouri—Missouri Power & Light Co., Mexico, plans 33,000 volt, 3 phase, 60 cycle transmission line between Moberly and State Highway 8.

Transmission Line—Wisconsin and Illinois—Milwaukee Electric Ry. & Light Co., Pub. Serv. Bldg., Milwaukee, Wis., and Pub. Serv. Corp. of Northern Illinois, 72 West Adams St., Chicago, Ill., plan 132,000 volt transmission line between Kenosha, Wis., and Waukegon, Ill., in spring. To exceed $25,000.

Ornamental Street Lighting System — Kiel, Wis.—City Council appropriated $12,000, constructing (1st unit) new ornamental street lighting system on Fremont St. To exceed $25,000. T. Brill, city clk. Engineer not selected.

Land Development—Brownsville, Tex.—J. V. Brassfield, and S. B. Bass, 7661 Sheridan Rd., Chicago, Ill., making plans developing 11,000 acres land in lower Rio Grande Valley in vicinity of here, incl. concrete lined irrigation canals $800,000, concrete highways $400,000, miscellaneous and irrigation machinery $500,000. Private plans.

Land Development—St. George (near McAllen), **Tex.**—Council Land & Development Co., McAllen, making plans developing town site, incl. streets $30,000, water distributing system $20,000, and sewers $15,000. Private plans.

Sewer Pipe Plant—San Antonio, Tex.—Gonzales Cement Wks., Inc., c/o A. O. Neuman, pres., purchased site and having preliminary plans prepared concrete sewer pipe plant. $70,000. Private plans.

Lighting System—San Francisco, Calif.—Plans ornamental lighting system on O'Farrell St. between Mason St. and Van Ness Ave., and Powell St. between Sutter and California Sts. $25,000 or more. M. M. O'Shaughnessy, city engr.

Oil Engine — Anadarko, Okla. — Voted $40,000 bonds, new oil engine. H. E. Musson & Co., Grain Exch. Bldg., Oklahoma City, engrs. Noted Nov. 4.

Lighting System — Alhambra, Calif. — Plans ornamental lighting system on portions 2nd, 3rd, 4th and 5th Sts. To exceed $25,000.

Lighting System—Barnes City, Calif.—See "Streets and Roads."

Fire Alarm—Ventura, Calif.—Defeated $50,000 bonds, fire alarm system. Noted Dec. 9.

Tunnel—Quebec—S. Quimet, engr., 76 St. Gabriel St., Montreal, preparing plans tunnel under St. Lawrence River between Montreal and Longueuil, for City of Montreal.

Crib Wharf—Cap de la Madeleine, Que.—Pub. Wks., Ottawa, Ont., plans 200 x 1?0 x 47 ft. crib wharf, here. $132,000. K. M. Cameron, Ottawa, engr. B. Grandmont, Three Rivers, dist. engr.

Cribwharf—Doucet Landing, Que.—Pub. Wks., Ottawa, Ont., plans 35 x 200 x 300 ft. cribwharf, here, $135,000. K. M. Cammeron, Ottawa, Ont., engr. B. Grandmont, Three Rivers, dist. engr.

Power Development — Shawinigan Falls, Que.—A. Giguere soon takes bids constructing power development. $350,000.

Tunnel — Three Rivers, Que. — Making plans 400 ft. concrete tunnel under Canadian Pacific R.R. tracks, St. Maurice St. $100,000.

Grain Elevator—Fort William, Ont.—N. M. Patterson soon takes bids grain elevator. $300,000.

Bids Received

Power Development—West Enfield, Me.—Bangor Hydro-Electric Co., E. M. Graham, 194 French St. ,taking bids power development. To exceed $25,000. Private plans.

Elevators—Brooklyn, N. Y.—Jan. 19, by Dept. Mental Hygiene, Capitol, Albany, electric elevators for Creedmoor Division, Brooklyn State Hospital; adv. E. N.-R. Dec. 30.

Electric Elevator—Kings, Park, N. Y.—Jan. 19, by Dept. Mental Hygiene, Capitol, Albany, electric elevator for Kings Park State Hospital, here; adv. E. N.-R. Dec. 30.

Ties—New York, N. Y.—Jan. 7, by Bd. Transportation, J. H. Delaney, chn., 49 Lafayette St., treated and untreated ties for use in portion of 14th St.-Eastern Rapid Transit R.R. (Order 7.)

Tunnel—Chattanooga, Tenn.—Jan. 11, by A. M. Nelson, tunnel engr., Court House, highway tunnel or twin tunnels through Missionary Ridge, for Highway Comrs. Hamilton Co., T. S. Wilcox, chn.; adv. E. N.-R. Dec. 30. Noted Dec. 2.

Gas Distribution System—Illinois—See "Contracts Awarded."

Garbage Unloading Dock—St. Louis, Mo.—See "Waste Disposal."

Gas Line — Corpus Christi, Tex. — See "Contracts Awarded."

Refrigerating and Heating Systems, etc.—San Antonio, Tex. — Woodlawn Terrace Hotel Co., c/o R. M. Chamberlain, c/o Builders Exch. Bldg., taking sub-bids and opens same about Jan. 15, refrigerating and heating systems, plumbing, 5 elevators, etc., for El Conquistador Hotel.

Bids Received

Borings—Corona (Ind. sta. Flushing), **N. Y.**—Bd. Transportation, J. H. Delaney, chn., 49 Lafayette St., New York City, Dec. 24, additional borings on site Corona Yard, here, Queens Boro, Agreement "FE," from Osborne Drilling Co., 122 Greenwich St., New York City, $3,548. Noted Dec. 16.

Telephone System—Kings Park, N. Y.—State Hospital Comn., Capitol, Albany, telephone system, at Kings Park State Hospital, here, from Michaels & Co., Inc., 301 Bd. of Trade Bldg., Norfolk, Va., $61,238. Noted Dec. 9.

Retaining Walls—New York, N. Y.—J. Miller, pres. Manhattan Boro, Municipal Bldg., column footings, retaining walls and abutments in connection with grading, paving and constructing viaduct in Riverside Dr. from West 155th to West 161st Sts., from Remo Realty Co., 645 East Tremont Ave., $328,969. Noted Dec. 16.

Comfort Stations, etc.—New York, N. Y.—H. Bruckner, pres. Bronx Boro, Crotona Park, 3rd and Tremont Aves., comfort stations at Westchester Sq. and at 3rd and Lincoln Aves., from Eastern Eng. Corp., 26 Court St., Brooklyn, $46,900 and $30,400 respectively; also sheet asphalt repaving Southern Blvd., from Gaffney Constr. Corp., Grand Central Terminal, $23,410. Noted Dec. 16.

High Pressure Steam Lines—Ogdensburg, N. Y.—State Hospital Comn., Capitol, Albany, Dec. 22, installing high pressure steam lines in St. Lawrence State Hospital, here, from W. A. Alexander, 23 Charlotte St., Rochester, (1) $37,729 and (2) $27,530. Noted Dec. 9.

Electrical Equipment—Phila., Pa.—Dept. City Transit, H. E. Ehlers, dir., 1211 Chestnut St., installing electrical equipment for shop buildings and yard lighting at Fern Rock Yard, Broad St. Subway, Contr. 130, from W. V. Pangborne & Co., 1927 West Montgomery St., $135,379. Noted Dec. 9.

Siphon—Oakland, Calif.—Directors East Bay Municipal Utility Dist., Dec. 10, from J. Welsh, Claus, Spreckels Bldg., San Francisco, constructing Rockridge Siphon, 2,430 ft. 54 in. lock-bar pipe 7/16 in. plate $51,953, 15,000 yd. trench excav. $14,625, 1,050 cu.yd. rein.-con. $16,800, 1,800 bbl. cement $5,400, etc., total $98,977. Noted Nov. 11.

Contracts Awarded

Power Development — Vermont — Green Mountain Power Co., c/o C. H. Tenney & Co., engrs., 200 Devonshire St., Boston, power development in Marshfield and Montpelier, to Sanders Eng. Co., 102 Exchange St., Portland, Me. Engrs. est. to exceed $25,000.

Battery House — New Bedford, Mass. — City, Municipal Bldg., 1 story, concrete and brick battery house, City Rifle Range, to J. J. Buckam, 741 Kempton St. Engrs. est. $30,000.

Rubble Wall—Dorchester (Boston P. O.), **Mass.**—Dept. Pub. Wks., Boston, rubble wall, Morton St., here, to J. A. Singarella, 110 High St., Boston. Engrs. est. $25,000. Noted Nov. 25.

Baseball Bleachers and Club House — Nashville, Tenn.—Nashville Baseball Club, Sulphur Dell Park, J. Hamilton, mgr., rein.-con. and steel truss bleachers, grand stand and stucco club house, to Hansen & Warden, Dermon Bldg., Memphis, approximately $75,000. Engrs. est. $100,000.

Foundation—Gary, Ind.—Radigan Bros., 24 East 6th St., foundation for 3 story and basement, brick and steel furniture store, to Anderson Bros., 515 Bway. Archts. total est. $160,000.

Outdoor Substation — Detroit, Mich. — Pub. Lighting Comn., 174 East Atwater St., outdoor substation, incl. 24,000 volt transformers, oil circuit breaker, lighting arresters, etc., to Miller York, Inc., 1523 East Congress St., $93,450. Noted Dec. 23.

Gas Distribution System—Illinois—Illinois Power & Light Co., East St. Louis, will build 2 mi. 6 in. gas service line from 24th St., Granite City to Nameoki (mail Granite City), by day labor.

Foundation, etc. — St. Louis, Mo. — See "Buildings—Commercial under Bids Desired."

Street Lighting System—St. Louis, Mo.—Bd. Pub. Serv., 208 City Hall, street lighting system in Dists. B and C, incl. 3,200 lights complete with concrete standards, glassware, cables, etc., to A. M. Ryckoff, Liberty-Central Trust Bldg., $558,197. Engrs. est. $650,000. Noted Dec. 23.

Gas Line—Corpus Christi, Tex.—City will extend gas mains into outlaying districts, by day labor. $18,000. Owner taking bids various sized gas pipe, etc. P. G. Lovenskiold, mayor.

Lighting System—Los Angeles, Calif. Ornamental lighting system on 7th St. between Bway. and Figueroa St., to Underground Constr. Co., 2210 Hyperion St., $30,888. Noted Oct. 7.

Lighting System—Ontario, Calif.—Ornamental lighting system on A St. and Euclid Ave., etc., to Los Angeles Electric Wks., 1128 South Los Angeles St., Los Angeles, $77,417.

Materials

Proposed Work

Sand, etc.—Syracuse, N. Y.—F. X. Wood, purch. agt. Onondaga Co., soon takes bids sand, cement, expansion joint material, etc.

Bids Desired

Tanks and Pipe—New York, N. Y.—Jan. 5, by H. Bruckner, pres. Bronx Boro., Crotona Park, 3rd and Tremont Aves., four 26 x 6½-ft. steel oil tanks, 6,000 gal. capacity; also 200 ft. 5 in. c.i. piping, etc.

Frogs, Rail Braces and Crossing—Phila., Pa.—Jan. 5, by Montgomery Smith, purch. agt. Pennsylvania R.R. Co., at 17th and Filbert Sts., frogs, rail braces and crossings, Contr. 8-1927. A. C. Shand, Broad St. Sta., ch. engr. railroad.

Switches, Crossing, Frogs, etc.—Phila., Pa.—Jan. 3, by Montgomery Smith, purch. agt. Pennsylvania R.R. Co., at 17th and Filbert Sts., switches, crossings, frogs, etc., Contr. 6-1927. A. C. Shand, Broad St. Sta., ch. engr. railroad.

Copper Wire, etc.—Columbus, O.—Jan. 6, by Bd. Purchase, H. C. Cain, secy., 5,000 ft. No. 8 D.B.R.C. stranded copper wire, 43,000 ft. No. 8 Parkway cables, 5,700 ft. No. 8 R.I.L.C. cable, 9,250 ft. 2 in. fiber conduit and 120 ft. 2 in. fiber conduit Harrington Joint bends; one 30 K.V.A. subway moving coil regulator; one 20 K.V.A. pole type moving coil regulator, three 10 K.V.A. safety coils and three 5 safety coils 6.6. amp., three 10 K.V.A. film protective devices, 20 one pole type O.D. 6,600 volt 100 amp. disconnecting potheads, 150 disconnecting potheads for base of standards, 104 each light ornamental standards and tops, 105 auto transformers 6.6 amp. Prim 14 amp. for 400 C.P. lamps; 19 safety coils 6.6. amp. 20 amp. sec. for 600 C.P. lamps, and 27 safety coils 6.6 amp. Prim. 20 amp. sec. for 100 C. P. lamps.

Bridge Lumber—Cresco, Ia.—Jan. 4, at office Auditor Howard Co., 3 cars standard sawed bridge lumber and 1 car cypress piling. L. Brown, Cresco, co. engr.

Road Oil — Winona, Minn. — Jan. 3, by G. W. Hoffman, city recdr., 170,000-200,000 gal. road oil.

Gas Pipe—Corpus Christi, Tex.—See "Unclassified under Contracts Awarded."

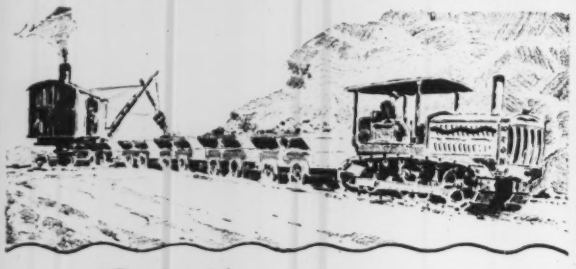
Bids Received

Sewer Castings, etc.—Minneapolis, Minn.—F. S. Gram, city purch. agt., Dec. 17, 400 tons sewer castings, from Baker Valve Co., 1847 East 28th St., at $50 per ton; 300,000 vitr. paving bricks for sewer construction, from A. C. Ochs Brick & Tile Co., 204 South 9th St., at $17.15 per M net. Noted Dec. 9.

Cast Iron Pipe—Glendale, Calif.—For (1) 15,000 ft. 8 in. Class "E" B. & S. c.i. pipe, (2) 5,000 ft. 12 in., (3) 4,000 ft. 16 in., (4) 1,800 ft. 20 in. and (5) 2,200 ft. 12 in. Class "D"; also (6) 40 tons Class "D" fittings, all f.o.b. cars Glendale, from Pike Co., 1506 Santa Fe Ave., Los Angeles (5) $2,173; from Grinnell Co., 520 Mateo St., Los Angeles (1) $1.05 (2) $1.80 (3) $2.74 (4) $3.85; from Natl. C. I. Pipe Co., Hellman Bldg., Los Angeles, (6) $90, and from U. S. C. I. Pipe Co., Monadnock Bldg., San Francisco (6) $90.

See proposal advertising on page 113

Constr. News page 423



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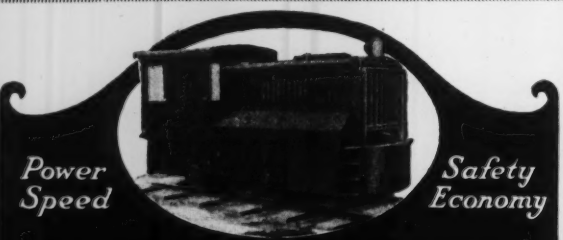

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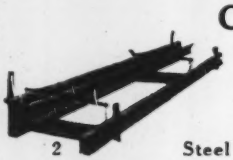

Volume 97 New York, December 30, 1926 Number 27

Engineering News-Record

A CONSOLIDATION OF ENGINEERING NEWS, ENGINEERING RECORD, THE SANITARY ENGINEER, AND THE CONTRACTOR

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Contents

Construction Methods and Plant at Martin Dam, Alabama 1064
BY L. G. WARREN.
ELABORATE derrick plant served by job railway handled excavation, concrete and forms. Sawmill and crushing plant important adjuncts. Camp layout notable.
Engineering News-Record, December 30, 1926. 14½ cols. Ill.

Applying Principles of the Catenary to Roof Design 1071
BY MARTIN ELIZONDO.
Engineering News-Record, December 30, 1926. 2¾ cols. Ill.

Aerial Surveys Lend Confidence on Hastily Organized Job 1072
BY KARL RIDDLE.
Engineering News-Record, December 30, 1926. 3 cols. Ill.

Studies and Works of a Missouri Drainage District 1074
BY JACOB A. HARMAN.
ADJACENT DISTRICTS co-operate for outlets. Runoff formula. Assessments and Taxes. Flat side slopes prevent caving of ditches. Pumping Plant. Profit-sharing contract and cost accounting.
Engineering News-Record, December 30, 1926. 7¼ cols. Ill.

Unusual Rail Dug up in Illinois 1077
Engineering News-Record, December 30, 1926. ⅜ col. Ill.

Relation of Zoning Ordinances to House Widths 1078
BY ARTHUR RICHARDS.
Engineering News-Record, December 30, 1926. 4 cols.

Defects in New Concrete Bridge and Proposed Repairs 1080
Engineering News-Record, December 30, 1926. 3¾ cols. Ill.

Building Small Concrete-Lined Earth Reservoir 1082
BY J. P. BAILEY.
Engineering News-Record, December 30, 1926. 2¼ cols. Ill.

Dredging Projects to Improve the Panama Canal 1083
BY R. Z. KIRKPATRICK.
Engineering News-Record, December 30, 1926. 2¼ cols. Ill.

Treated Douglas Fir Ties Show Strength Unaffected 1084
Engineering News-Record, December 30, 1926. 2¼ cols. Ill.

Interest During Construction Not a Capital Charge for Taxes 1085
Engineering News-Record, December 30, 1926. 1 col.

City Invites Gratuitous Service in Designing Bridges 1086
Engineering News-Record, December 30, 1926. 2 cols.

Editorials 1061
Letters to the Editor 1087
News of the Week 1091
Manufacturers' Equipment and Materials 1096
Business Side of Construction 1098
Weekly Construction Market 1100
Construction News 47
What and Where to Buy 130
Searchlight Section 113
Index to Advertisers 136
Directory of Consulting Engineers 110

Next Week:

Annual Highway Number

FOR the Annual Highway Number of *Engineering News-Record* next week, preceding the convention and show at Chicago of the American Road Builders' Association, a quota of exceptional staff and contributed articles has been assembled. The selection of the contents of the Jan. 6 issue is being made at this writing from the following available material:

Colorado's Most Distinctive Road—the Cameron Pass Highway—By A. B. Collins, division engineer, state highway department. This is the first of a series of exclusive articles featuring for a number of states the particular work considered by the state highway engineer to be of outstanding importance during the year 1926.

Why County and Township Highway Control Should be Merged—Evidence from Indiana offered by Ben. H. Petty, professor of highway engineering at Purdue.

Japan's Superhighway—By H. Sakakibara. Use of American methods and machinery by native labor.

Maintenance Costs of Brick Roads—A record covering 20 years.

Rock Asphalt Construction with New Devices—By W. L. Moore, resident engineer, Tennessee Highway Department.

Theory of Cross-Joint Spacing in Concrete Roads—By W. W. Zass, Arkansas Highway Department.

Building Canyon Highway in British Columbia—By Patrick Philip, deputy minister of public works.

Traffic Economics as Basis for State Highway System Routes—By W. G. Sloan, state highway engineer of New Jersey.

Four-Lane Flexible Concrete Paving Slab—By F. M. Balsley, Wisconsin Highway Commission.

Also:

Several Pages of Hints for Maintenance Engineers.

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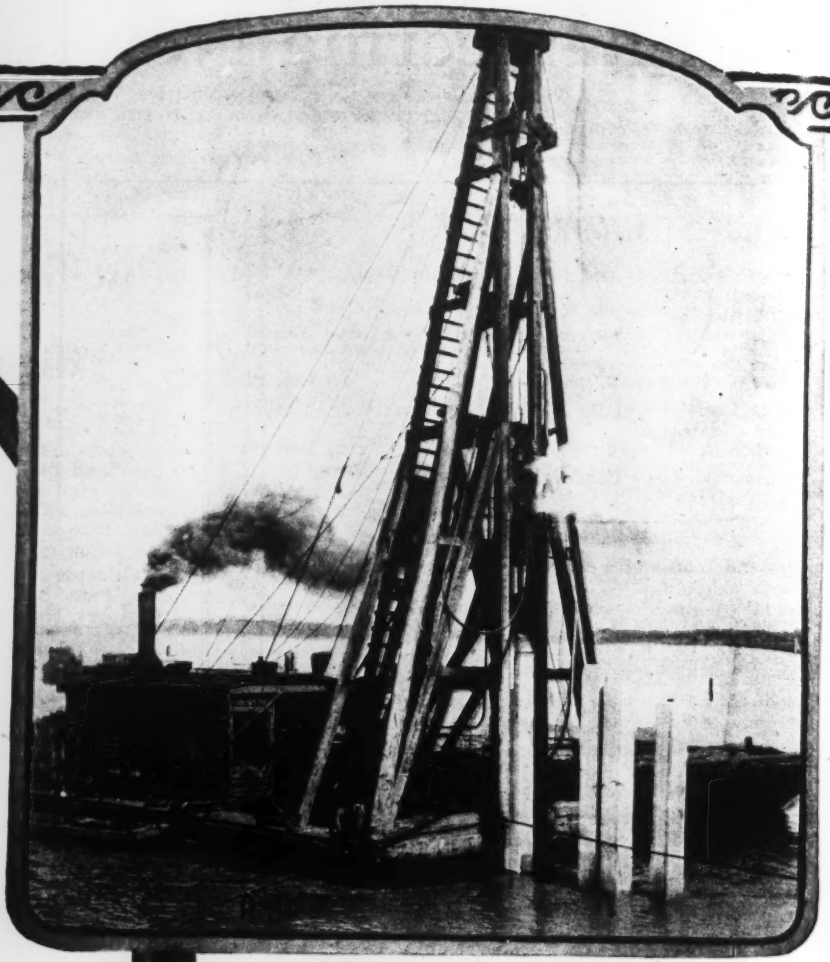

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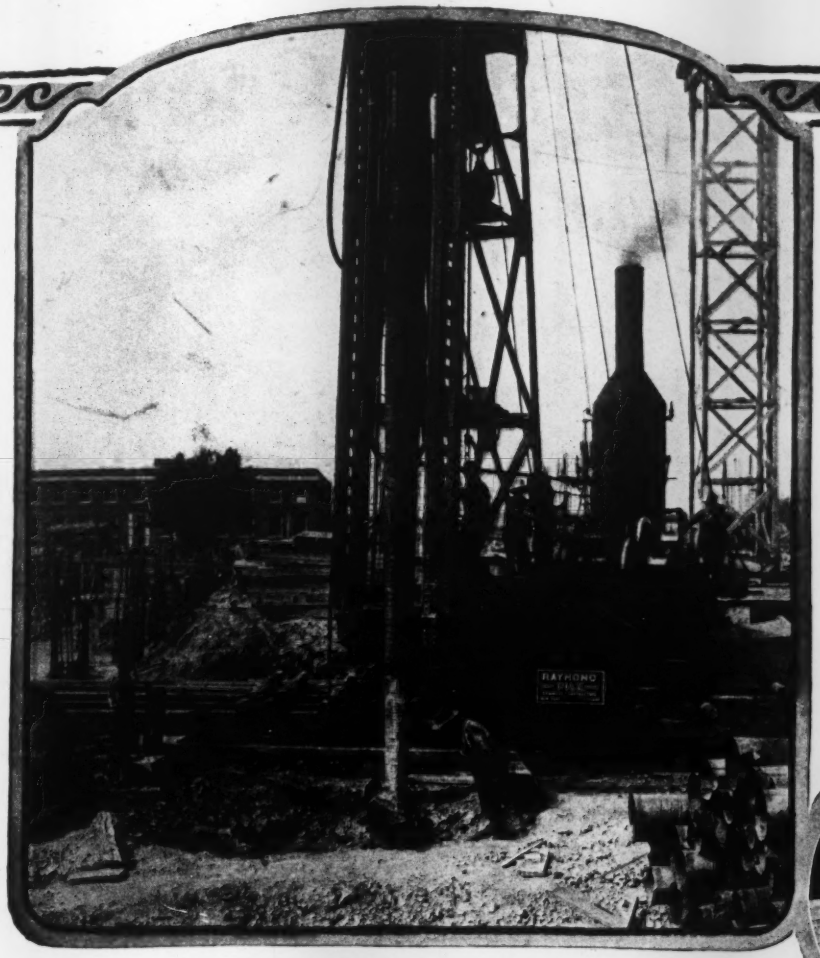

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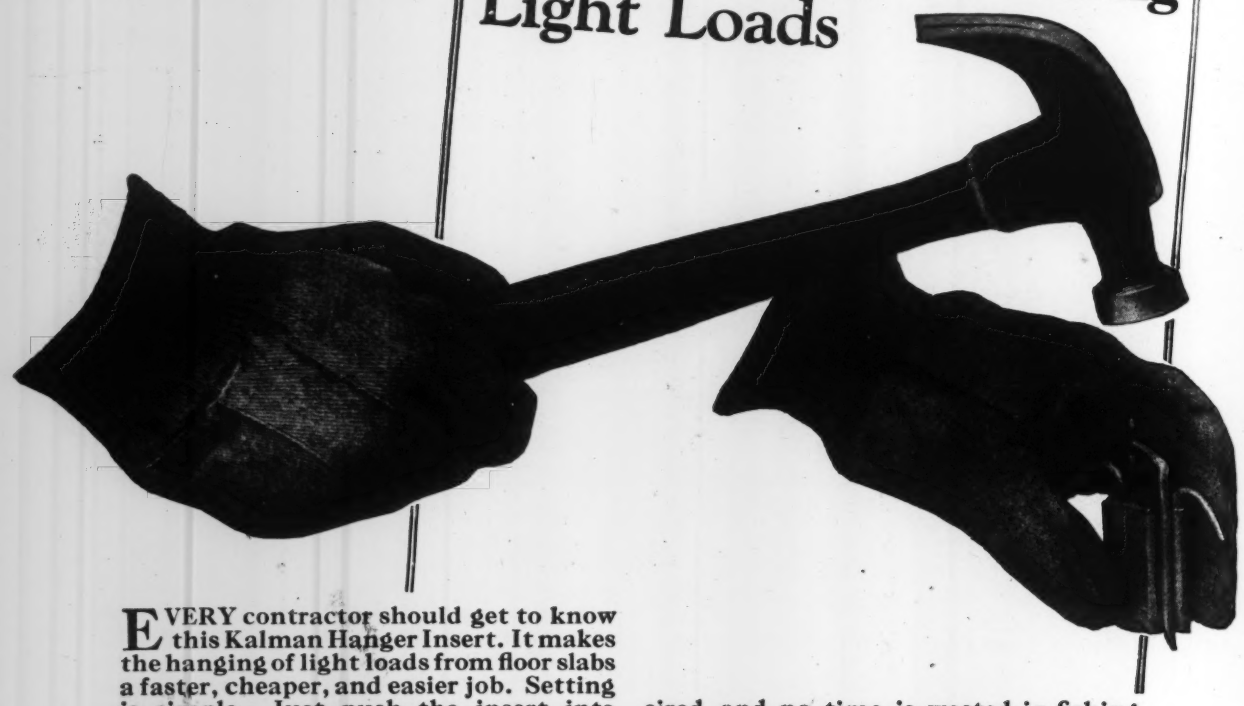

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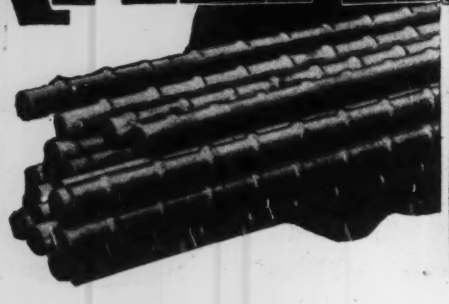

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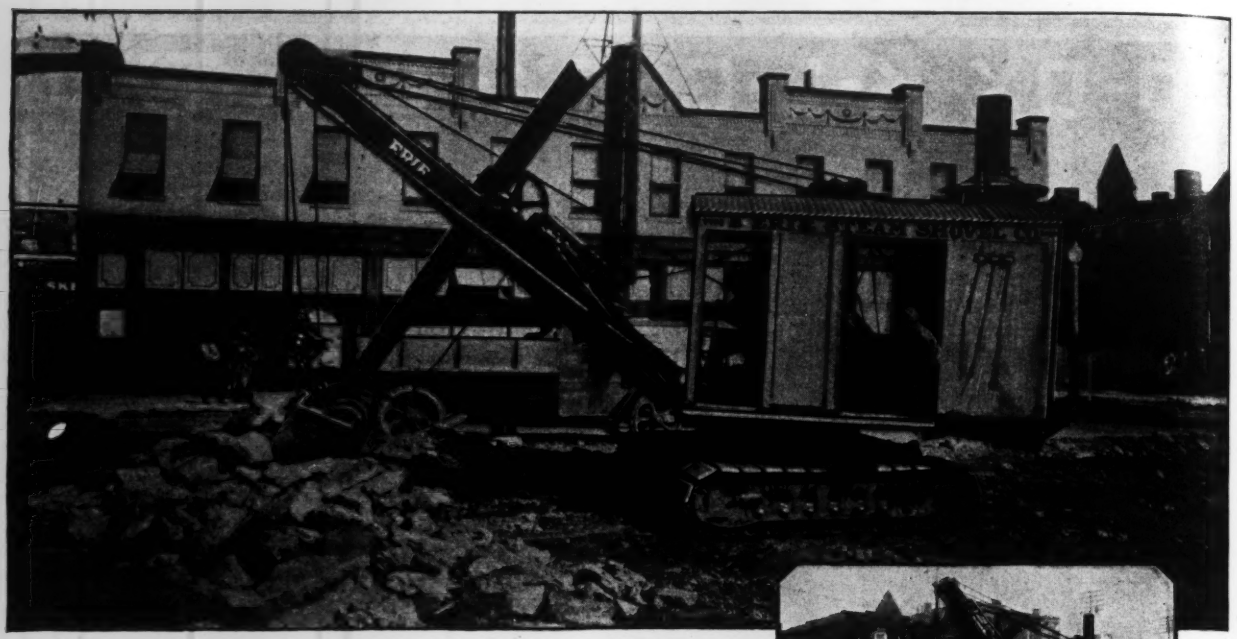

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½ yd.— ⅝ yd. "A" ERIE. A lighter and smaller machine that has the speed and vitality of a B-2 ERIE "Dreadnaught." Light enough to cross small bridges, and powerful enough for real hard digging— like the work shown here.

"No other shovel— steam or gas— can anywhere near equal ERIE performance,"

write Morgan & Watkins, St. Louis, Mo., after making more money with ERIES, and seeing other contractors do the same

BIGGER PRODUCTION is what has made the ERIE the first pick of contractors in St. Louis (and most everywhere else).

Just ask the wide awake contracting firm owning these two Steam ERIES! They have made real money in excavation that is harder than most rock work, and they write:

"When we purchased our first ERIE our operations were chiefly taking up old concrete and asphalt pavements, and the work done was so satisfactory that we did not hesitate in buying our second ERIE.

"Our average run for each shovel on this job has been 1,200 square yards per 9-hour day. In our estimation there is no other revolving shovel, either steam or gas, that can anywhere near equal the successful performance of the ERIE."— *James Watkins, Morgan & Watkins, St. Louis, Mo.* (2 ERIES)

Another St. Louis contractor had a friction drive gas shovel tearing up pavements, and the work didn't move nearly fast enough to suit the general contractor. So the excavating man rented a Steam ERIE, which proceeded to *outdig the friction drive gas shovel two to one.*

What ERIES are doing in St. Louis is a good sample of what they are doing everywhere else.

The *direct drive* principle means more speed— BIGGER PRODUCTION— on shovel work or crane work. And reliable ERIE construction means ⅔ less upkeep cost, and the steadier performance that goes with lower upkeep.

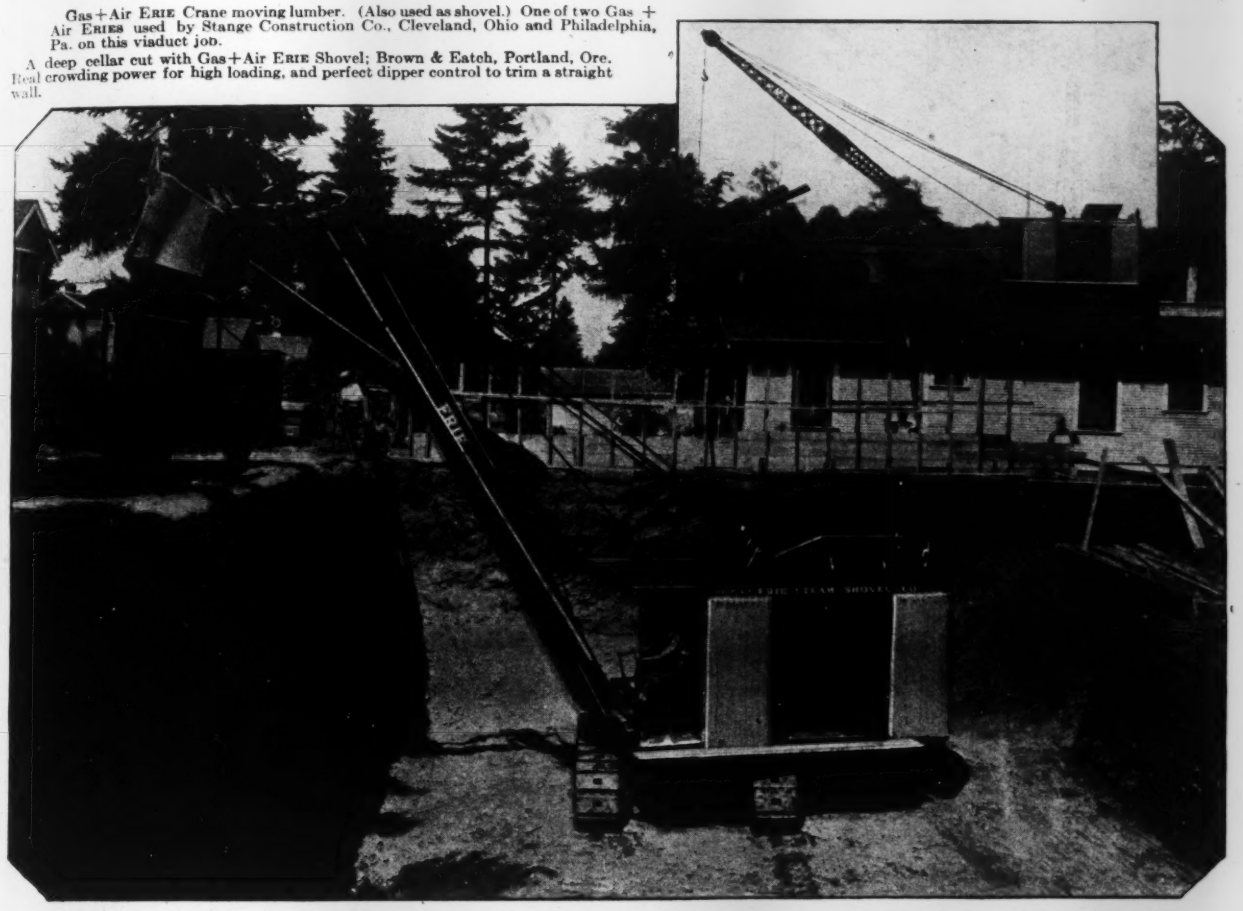
That's why there are more than 4,200 ERIES in service— far more revolving shovels and cranes than any other manufacturer has produced.

ERIE STEAM SHOVEL CO., Erie, Pa., U. S. A.
Branch Offices: Boston, New York, Philadelphia, Pittsburgh, Atlanta, Chicago
Representatives throughout the U. S. A.

ERIE Steam DREADNAUGHT Shovel and Crane

Gas+Air ERIE Crane moving lumber. (Also used as shovel.) One of two Gas + Air ERIES used by Stange Construction Co., Cleveland, Ohio and Philadelphia, Pa. on this viaduct job.

A deep cellar cut with Gas+Air ERIE Shovel; Brown & Eatch, Portland, Ore. Real crowding power for high loading, and perfect dipper control to trim a straight wall.



Your work MOVES with a Gas+Air ERIE!

When you want to use a gasoline shovel and get BIG PRODUCTION, too, there's just one shovel to use.

Owners of Gas+Air ERIES report outputs of from 700 to 800 yds. a day, up to 1,500 yds. a day or more when sidecasting. These shovels are so speedy that they have *no competition* in the gas shovel field.

For instance, James Allen Engineering Co. of Olympia, Washington, writes:

> "During the current month we have worked 46 eight-hour shifts with our Gas+Air ERIE, and moved 30,740 cu.yds., 83% loaded into trucks and the balance sidecast. We believe these figures tell the story—we are well pleased."

For Big Output, you need a DIRECT DRIVE shovel. The Gas+Air ERIE is much faster than any single-engine gas shovel, because it works on the same principle as a Steam ERIE. Direct drive for every motion. *Instant action for crowding or swinging*, at the touch of a throttle lever. No waiting for friction clutches to take hold or let go— the direct-connected air engines are always in gear.

"It's the *last word* in grading equipment," writes D. L. Dennis, of Smethport, Pa.— and he has 2 Gas+Air ERIES as well as 3 Steam ERIES. He knows what to expect of a real power shovel.

Faster Crane or Dragline, as well as shovel. The direct-connected swing engines give the flexibility and speed of a steam ERIE— and the same perfect control.

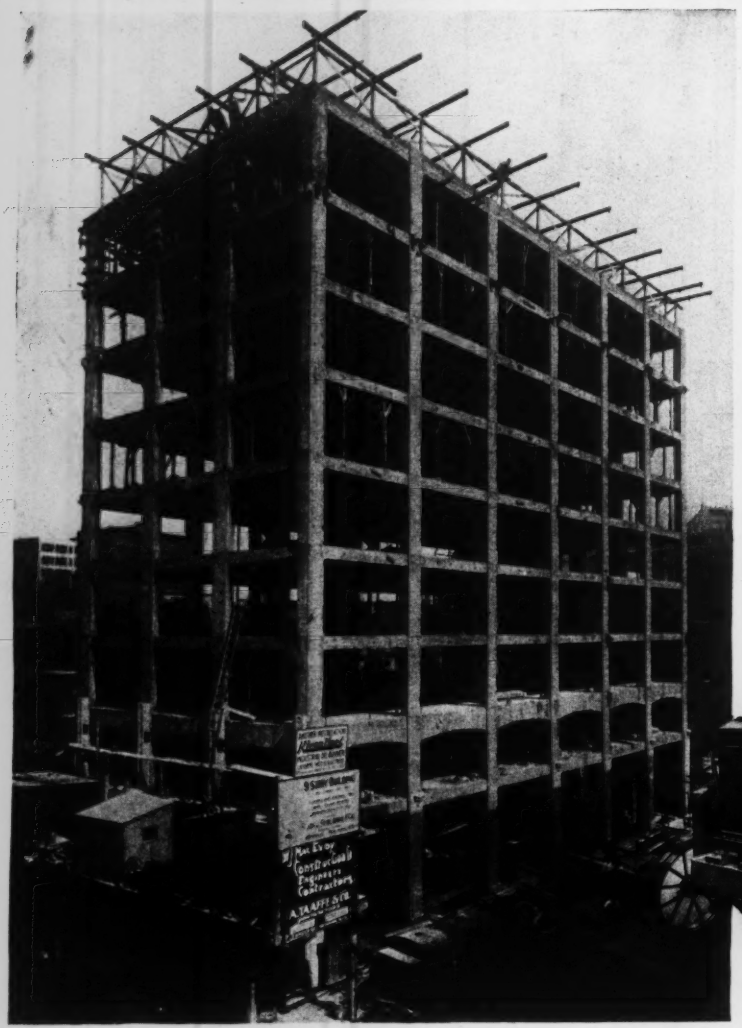
REPEAT ORDERS from all parts of the country have shown what contractors think of this BIG PRODUCTION gas shovel. Write for Bulletin N-82.

ERIE STEAM SHOVEL CO., Erie, Pa., U. S. A.

Builders of ERIE Shovels, Cranes, Ditchers, Draglines, etc.

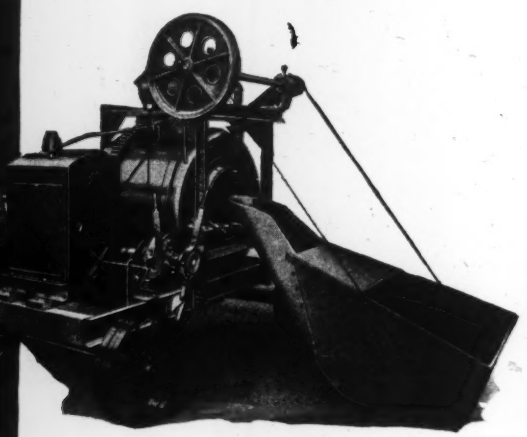
ERIE GAS+AIR Shovel and Crane

Fully protected by basic patents



Chalk another one up for Ransome

The Feibleman-Lehman Building
Newark - - - New Jersey
W. J. MacEvoy Construction Co.



Ransome
7-S Standard
Building Mixer

One 7-S Ransome Standard Building

Mixer finished this nine story reinforced concrete building in three and a half months.

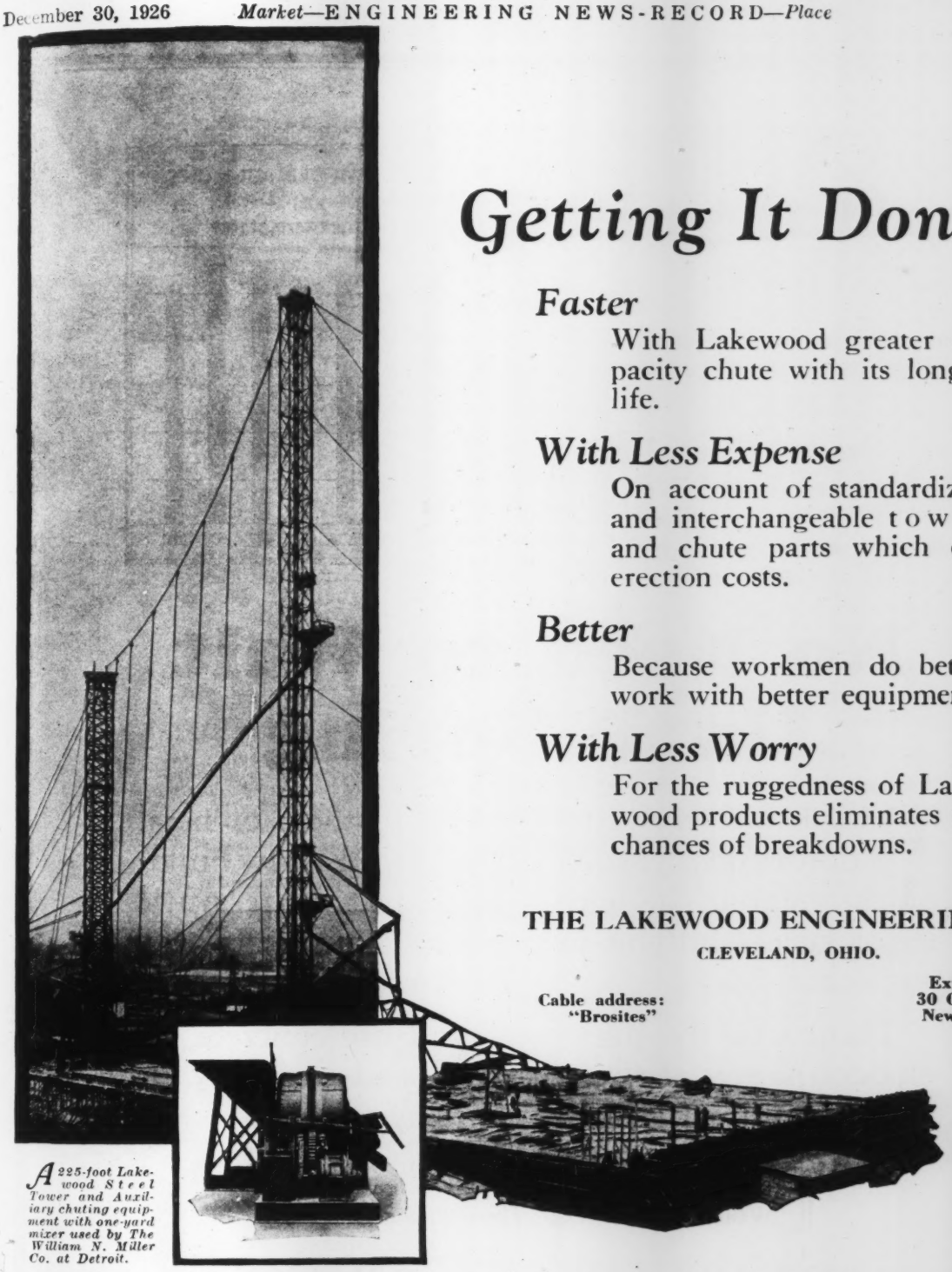
This sets another record in Newark for Ransomes. The previous one was made by the Clifford F. MacEvoy Co. when they poured 768 cubic yards of concrete in nine hours and fifty minutes on the Centre Market job.

Ask for the Ransome 7-S Bulletin. It shows you why.

RANSOME CONCRETE MACHINERY CO
Dunellen - - - - - New Jersey

490

Ransome Standard Building Mixers



A 225-foot Lakewood Steel Tower and Auxiliary chuting equipment with one-yard mixer used by The William N. Miller Co. at Detroit.

Getting It Done

Faster

With Lakewood greater capacity chute with its longer life.

With Less Expense

On account of standardized and interchangeable tower and chute parts which cut erection costs.

Better

Because workmen do better work with better equipment.

With Less Worry

For the ruggedness of Lakewood products eliminates the chances of breakdowns.

THE LAKEWOOD ENGINEERING CO.

CLEVELAND, OHIO.

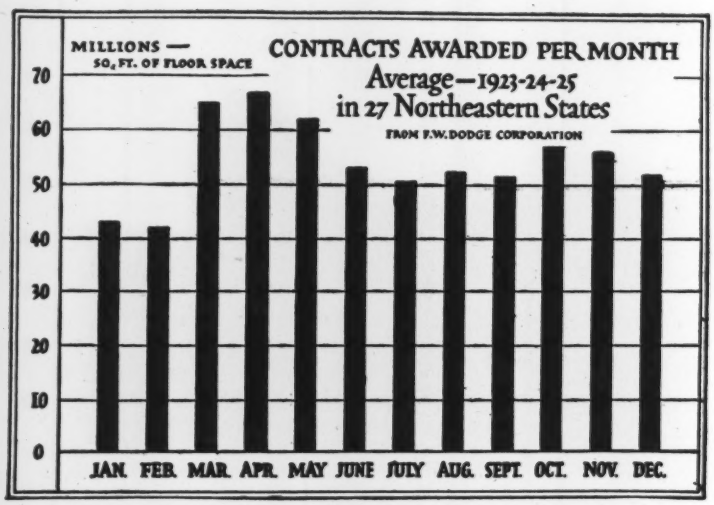
Cable address: "Brosites"

Export office: 30 Church Street New York City

LAKEWOOD

Paving and Construction Equipment

Even in the north, construction work put under contract now continues in large volume throughout the year. In the dead of winter awards are two-thirds as great as at the spring peak. The high fall awards are strong evidence that winter construction pays, as they must largely represent work to be carried on through the cold months.



No Need to Wait Until Spring

BUILDING construction is now carried on throughout the winter as successfully as in any other season.

Think what the quicker occupancy of these winter-built structures means to their owners! If you need a new building, don't wait until spring. Start plans now for winter construction.

And use concrete for speed and economy. It will pay you.

Write nearest office listed below for booklets on "Winter Construction." There is no obligation

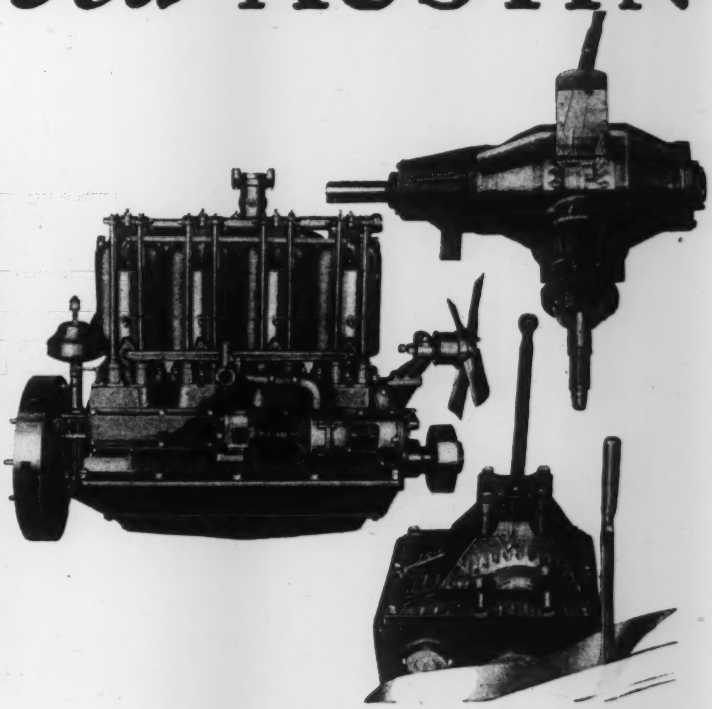
PORTLAND CEMENT ASSOCIATION

A National Organization to Improve and Extend the Uses of Concrete

Atlanta	Denver	Lincoln, Nebr.	Oklahoma City	Salt Lake City
Birmingham	Des Moines	Los Angeles	Parkersburg	San Francisco
Boston	Detroit	Milwaukee	Philadelphia	Seattle
Chicago	Indianapolis	Minneapolis	Pittsburgh	St. Louis
Columbus	Jacksonville	Nashville	Portland, Oreg.	Vancouver, B. C.
Dallas	Kansas City	New Orleans	Richmond, Va.	Washington, D. C.
		New York		

More Power *at the* DIGGING END

The *"Improved"* AUSTIN

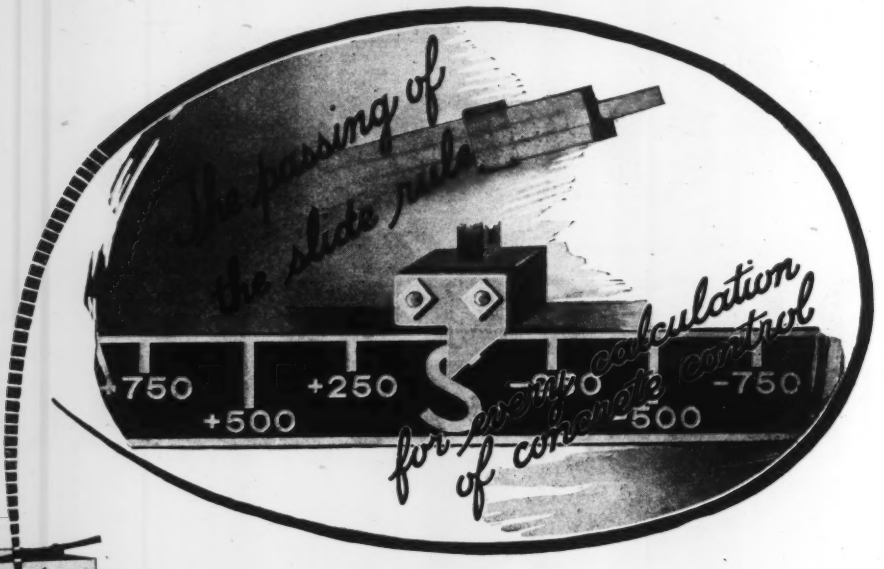


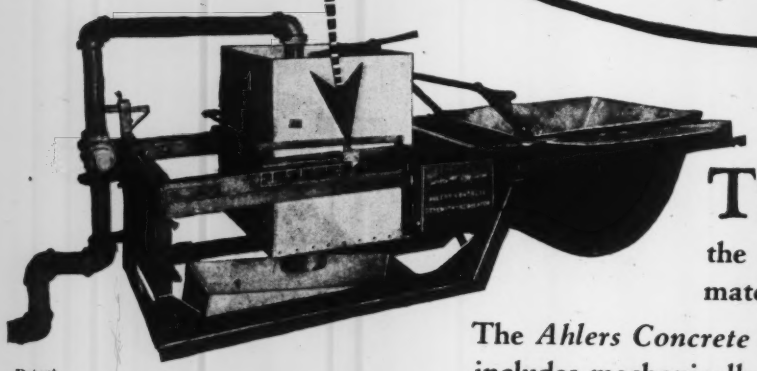
More power at the digging end is the result of a minimum loss in power transmission. Austin power is transmitted through transmissions that have stub tooth gears which operate in oil. The cut stub tooth gears reduce friction for when in mesh have a rolling action. This type of gear is used throughout and conserves fuel as well as power. Getting the power to where it is needed is a part of Austin mechanical efficiency obtained through simplicity of design.

See an Austin at work before you make a selection.
Further details on request.

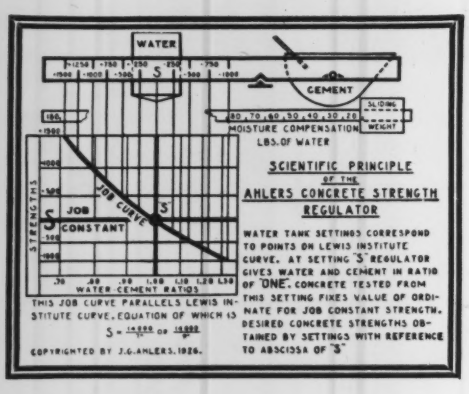
AUSTIN
Machinery Corporation
MUSKEGON · MICHIGAN

We are interested in the improved
Austin Trencher ☐ Austin Backfiller ☐
Name .....
Street .....
City and State .....
Work engaged in .....
.....
Ad. No. 24-12-30





Patent Pending


WATER
CEMENT
MOISTURE COMPENSATION
LBS. OF WATER
SCIENTIFIC PRINCIPLE
OF THE
AHLERS CONCRETE STRENGTH
REGULATOR
JOB CONSTANT
JOB CURVE
S
STRENGTHS
WATER CEMENT RATIOS
WATER TANK SETTINGS CORRESPOND TO POINTS ON LEWIS INSTITUTE CURVE. AT SETTING 'S' REGULATOR GIVES WATER AND CEMENT IN RATIO OF ONE. CONCRETE TESTED FROM THIS SETTING FIXES VALUE OF ORDINATE FOR JOB CONSTANT STRENGTH. DESIRED CONCRETE STRENGTHS OBTAINED BY SETTINGS WITH REFERENCE TO ABSCISSA OF 'S'
THIS JOB CURVE PARALLELS LEWIS INSTITUTE CURVE. EQUATION OF WHICH IS
COPYRIGHTED BY J.G. AHLERS, 1926.

THE only accurate data on which to base field control of concrete are the actual physical properties of all materials used and conditions on the job.

The *Ahlers Concrete Strength Regulator* at the setting S includes mechanically all this data.

This MACHINE-CONTROLLED concrete when tested will automatically establish a standard data which includes all variables—and they can henceforth be eliminated from consideration, so long as they remain unchanged. Using this as a reference, the Regulator can then be set to produce any desired strength of concrete and to maintain it constantly. Its *entire operation* may be left to the average job mechanic.

Simple, isn't it? And it means greater profits for the contractor, too. Write for Bulletins.

Division of

BARNEY-AHLERS CONSTRUCTION CO.

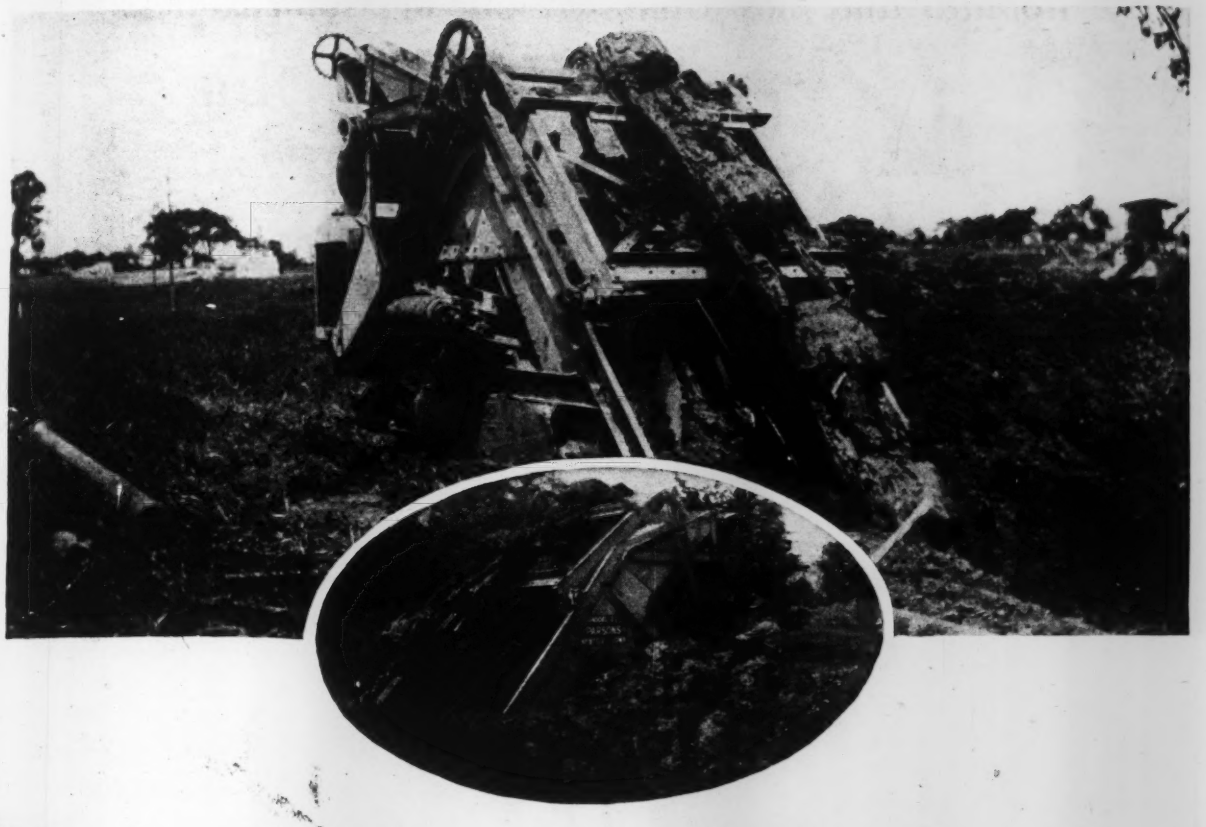
110 West 40th Street, NEW YORK CITY

New England States
Hedge & Matthels, 50 Dorchester Ave., Boston
Philadelphia, Pittsburgh, Cleveland and Chicago
Dravo Equipment Co.
Kansas, Missouri, Oklahoma
Funkhouser Equip. Co., 2425 Jefferson St., Kansas City, Mo.
Edw. R. Bacon Co., Folsom at 17th St., San Francisco, Calif. Arizona, Nevada.
Washington, Oregon and part Idaho
L. A. Snow Co., 1032 10th Avenue, South Seattle, Wash.

Ahlers CONCRETE STRENGTH-REGULATOR

WATER CEMENT

PARSONS



"She's done a lot of digging-and no trouble yet"

The digging was sticky on this subdivision job at Columbus, Ohio, and mud would have clogged the buckets of any digger not equipped like the Parsons with a device that forces buckets to unload cleanly every time around.

This Parsons Model 21 Ditcher is the property of B. F. Patterson of Columbus. "She's done a lot of digging and we've had no trouble yet" says this contractor. "Take it all around, there isn't any of them got any more speed than this machine."

Contractors, public utility companies, and realtors the country over are all profiting by the ability of the Parsons Model 21 Ditcher to dig trench at low cost.

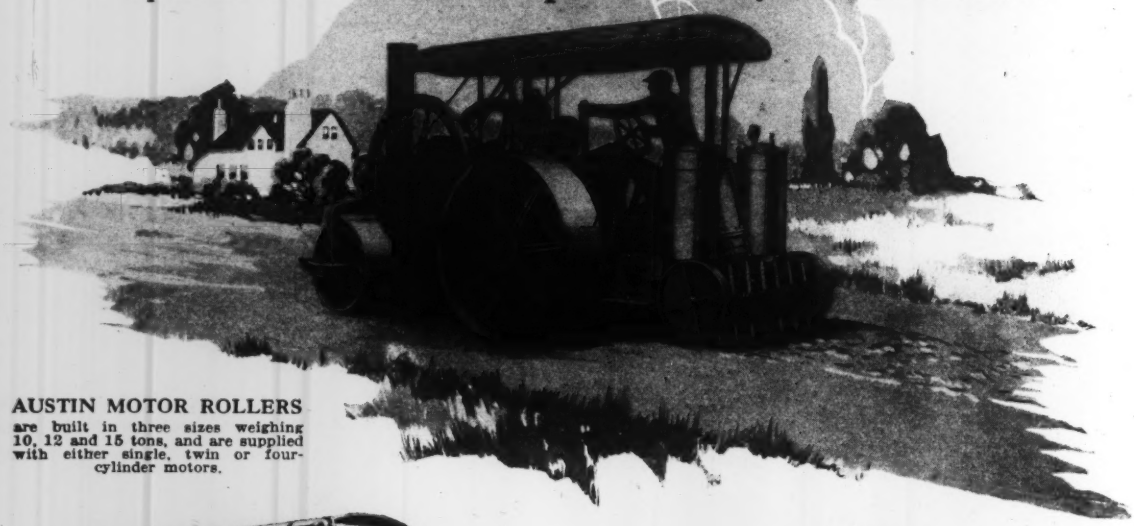
In addition to ordinary digging, the Parsons 21 Ditcher is adapted to the unusual conditions—such as digging along a line of poles or trees, close to the curb, etc.

THE PARSONS COMPANY
Newton, Iowa, U. S. A.

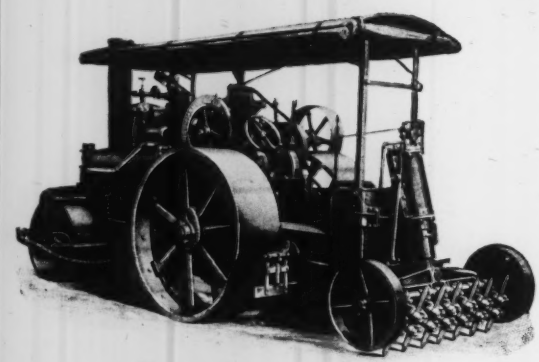
Chicago: 11 So. La Salle St. **Los Angeles: C. C. Sixbey, 677 Chamber of Commerce Bldg.** **New York: 501 Fifth Avenue**

A Study In Rollers

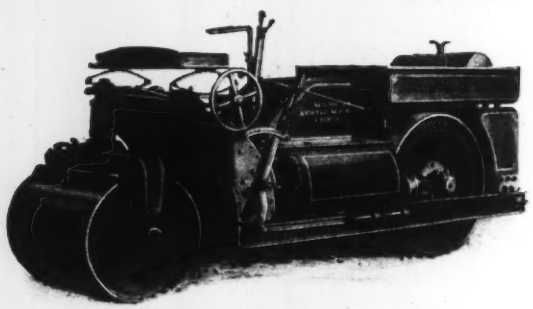
by the Manufacturer of America's First, most Popular and most Complete line of Motor Rollers



AUSTIN MOTOR ROLLERS
are built in three sizes weighing 10, 12 and 15 tons, and are supplied with either single, twin or four-cylinder motors.

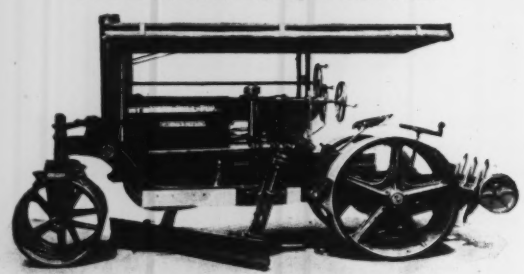


AUSTIN STEAM ROLLERS
Built in two sizes, weighing 10 and 12 tons.

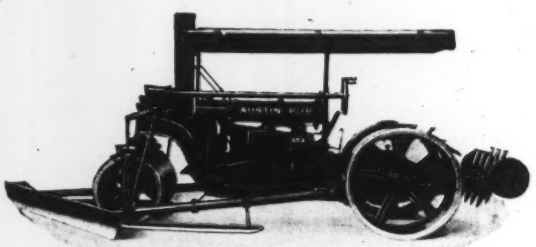


AUSTIN TANDEM ROLLERS
Built in four sizes, weighing 5, 6, 7 and 8 tons, and with either twin or four-cylinder motors.

AUSTIN



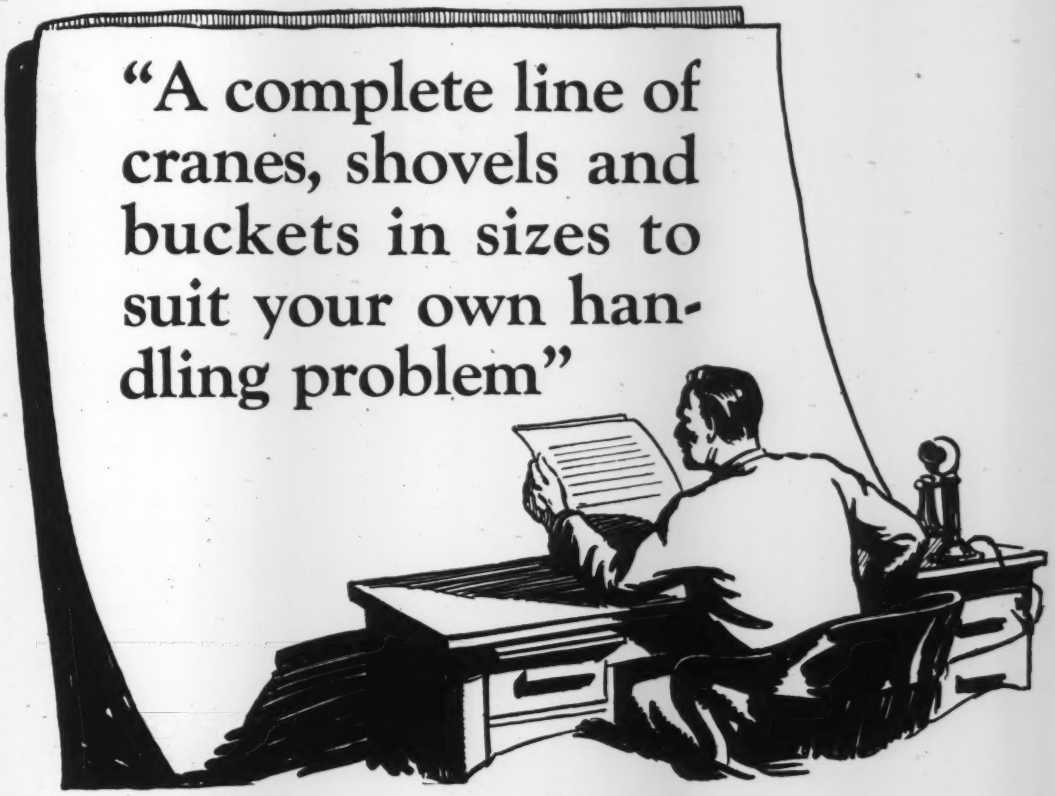
BULL-PUP
Normal weight 5 tons, which can be increased to 5½ or 6 tons. Power supplied by International 10-20 tractor.



AUSTIN-FORDSON PUP ROLLER
Normal weight 3½ tons, which can be increased to 4, 4½ or 5 tons. Fordson power.

The Austin-Western Road Machinery Co.

400 North Michigan Avenue, Chicago, Illinois, U. S. A.



Make 1927 your profitable business year

Start in right by purchasing dependable handling equipment. Cranes or shovels shut down for repairs do nothing toward helping your business year be a profitable one. Avoid shut-downs with ORTONS.

Consider, before you purchase, the various makes of cranes, shovels, and buckets on the market. Know the advantages and features that one has over another. Know which one will do your particular job the way you want it done . . . in the shortest time . . . for the least money. ORTONS have a twenty years' reputation for being economical in operation and upkeep.

Perhaps you want a machine electrically operated . . . you may have it that way. Electric, gasoline or steam power is available on practically every model we build.

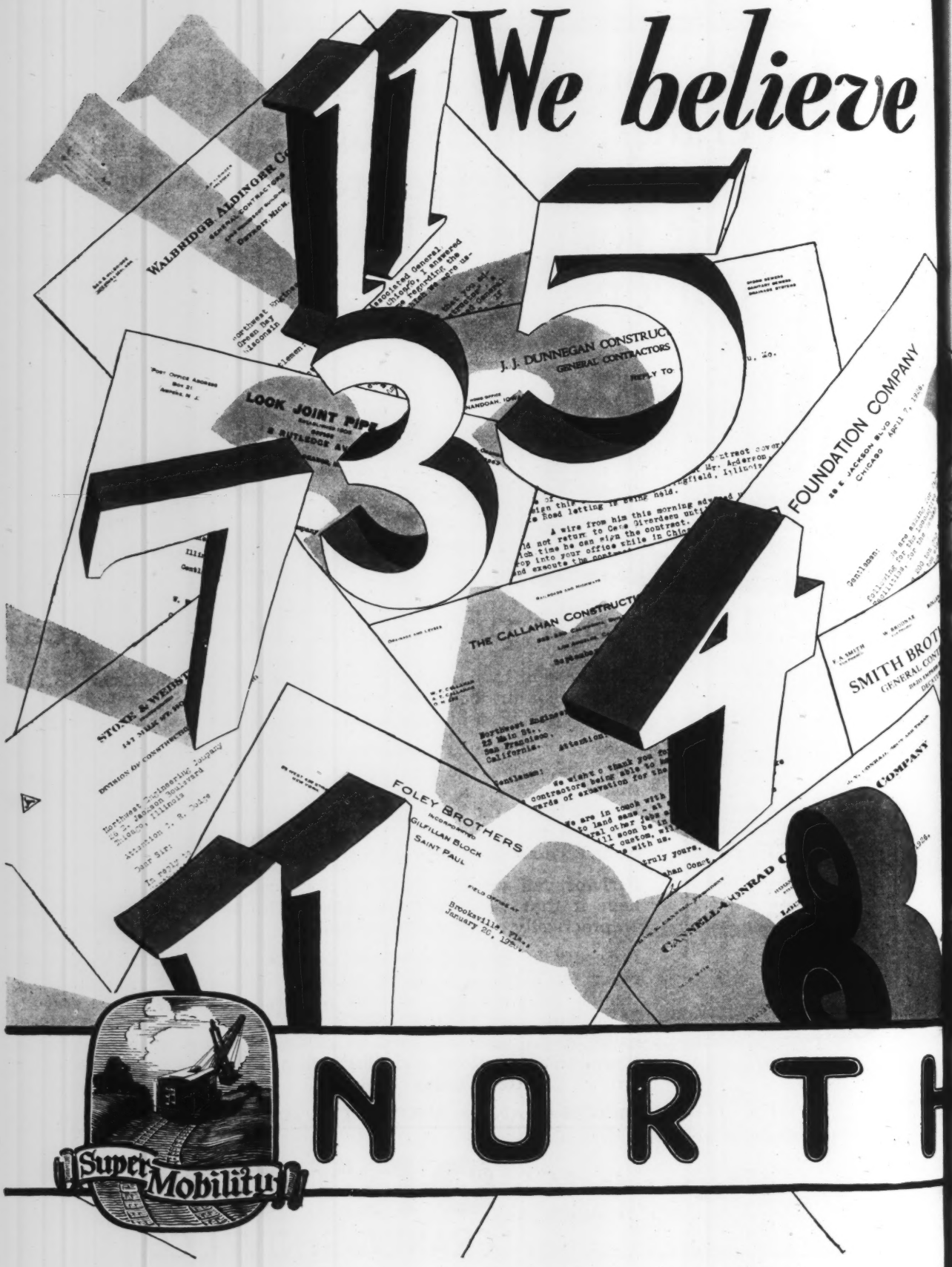
It would be impracticable to describe and illustrate, adequately, every ORTON in a single catalog. We have a general catalog, though, for purchasers who are not decided as to the size and style of machine they require. We would like to have you outline your handling problem and then we can send you a specialized bulletin completely describing and illustrating the right machine to do your job. . . . write us today.

Manufacturers of Gasoline, Steam and Electric Locomotive Cranes, Flexible Tread Cranes, Road Wheel Cranes, Gantry Cranes and Power Shovels.

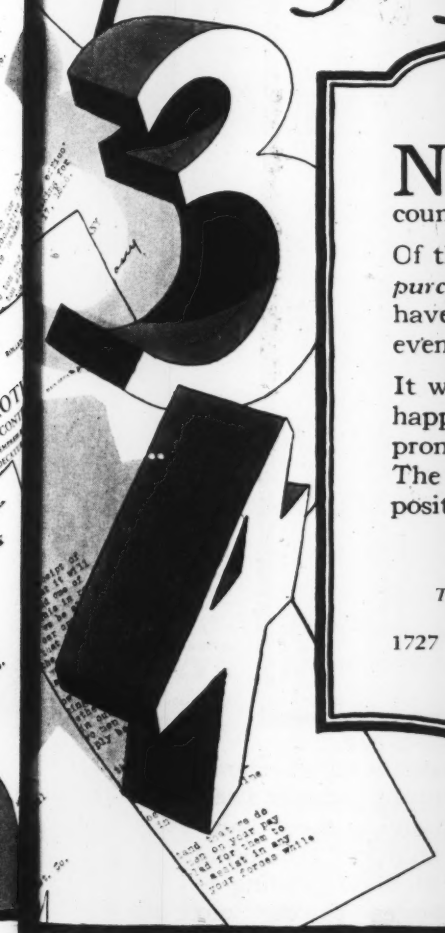
Gasoline and Electric Truck Cranes, Rubber Tired Wheel Cranes, Clamshell Buckets, Orange Peel Buckets ½ to 5 cubic yards capacity, Coal Crushers.

ORTON CRANE & SHOVEL CO., 608 So. Dearborn St., CHICAGO

ORTON
CRANE & SHOVEL CO.


We believe
1135
1134
1138
WALDRIDGE ALDINGER
J. J. DUNNEGAN CONSTRUC
GENERAL CONTRACTORS
LOOK JOINT PIPE
FOUNDATION COMPANY
THE CALLAHAN CONSTRUCTI
SMITH BROT
GENERAL CONT
FOLEY BROTHERS
GILFILLAN BLOCK
SAINT PAUL
CANNELL-CONRAD
COMPANY
NORTH
Super Mobility

a repeat order to be the most sincere proof of satisfaction!



NORTHWEST has placed shovels, cranes and draglines with all classes of contractors throughout the country.

Of this number, over 40%,—*nearly half of those who have purchased Northwests* (including the nation's leaders)—have returned to purchase their second, third, fourth and even tenth and eleventh.

It would be an amazing coincidence if Northwests "just happened" to be used by contractors who have achieved pronounced success—but chance had little to do with it. The same high standards that placed these concerns in positions of leadership led them to select Northwests.

NORTHWEST ENGINEERING CO.

The world's largest exclusive builders of gasoline, electric and Diesel powered shovels, cranes and draglines.

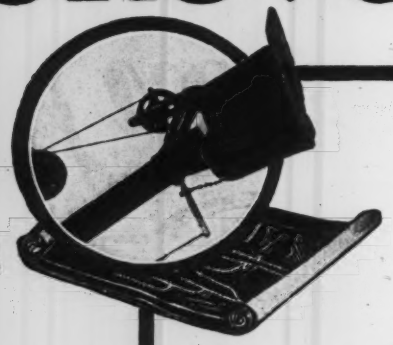
1727 Steger Bldg. 28 E. Jackson Blvd.

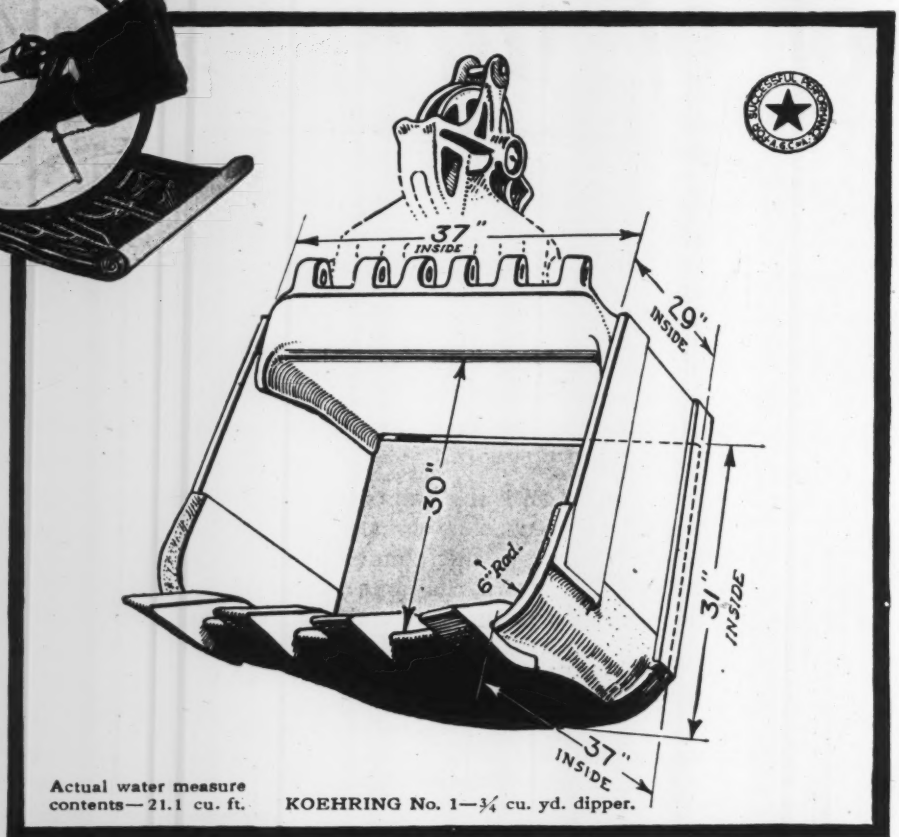
Chicago, Ill., U. S. A.

WEST

ENR12-30Gray

Does dipper capacity mean Anything to Shovel rating?





Actual water measure contents—21.1 cu. ft.

KOEHRING No. 1—¾ cu. yd. dipper.

Capacities No. 1 Shovel

No. 1—¾-cu. yd. dipper, struck measure, on 19 ft. 6 in. boom, with 16 ft. dipper sticks, 4 cylinder, 5x6 in. gasoline engine, 1100 R. P. M.

Capacities No. 2 Shovel

No. 2—1¼ cu. yd. dipper, struck measure, on 20 ft. 7 in. boom, with 16 ft. dipper sticks, 4 cylinder, 6x7 in. gasoline engine, 925 R. P. M.

AS an example of Koehring conservatism in rating capacities, compare the dimensions of the Koehring ¾ yard shovel dipper with the dipper dimensions of many shovels rated at 1 yard capacity!

Remember too that the Koehring dipper not only handles its full heaped-up load, but crowds above and beyond the end of the boom.

Because of independent cable crowd, the Koehring instantly adapts itself at the levers' command to meet every situation — long, shallow, horizontal dipper strokes for shallow grading — deep, close-in gouges to dig out boulders, deep digging, high bank work, high or low loading, *all* are the same to the Koehring.

Write for Shovel Bulletin No. S-8

KOEHRING COMPANY, MILWAUKEE WISCONSIN

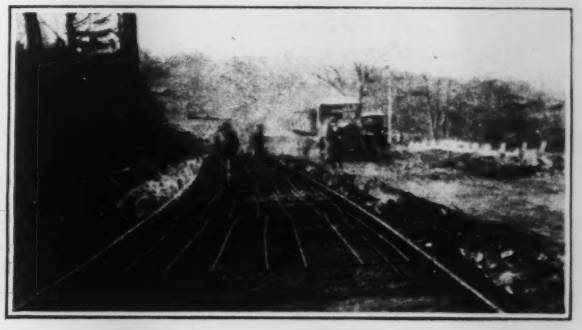
PAVERS, MIXERS—GASOLINE SHOVELS, CRANES AND DRAGLINES

Sales Offices and Service Warehouses in all principal cities
Foreign Dept., Room 1370, 50 Church St., New York City
Canada, Koehring Company of Canada, Ltd., 105 Front Street, East, Toronto, Ontario
Mexico, F. S. Lapum, Cinco De Mayo 21, Mexico, D. F.

KOEHRING HEAVY DUTY

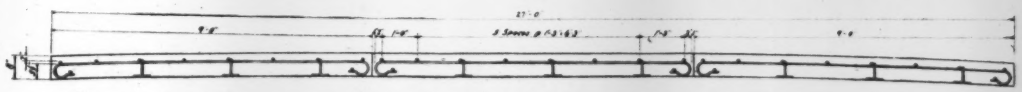
A—3208

Improving the ALBANY POST ROAD



Near TARRYTOWN, NEW YORK

New York State Highway No. 657 Yonkers Contracting Co., Yonkers, Contractors



Typical Cross Section Showing Reinforcement

A good example of the use of Havemeyer Deformed Bar Reinforcement in the Widening and Resurfacing of Important Highways

The type of field assembled bar reinforcement shown above and used on this work is one of the State Standard Types and is frequently used where traffic conditions are severe.

Reinforcement for this and many similar Highway Projects furnished by the Concrete Steel Company.

You can depend upon Havemeyer Service

HAVEMEYER BARS
Rolled Exclusively From
NEW BILLET STEEL

Concrete Steel Company

42 Broadway **New York City**

Sales Offices, Warehouses and Fabricating Shops—Principal Cities

Correct Alignment
Mechanically Positive in Timken Bearings

Thrust, speed, torque or radial load serve to align Timken rolls all the more positively!

At two well-separated areas on the large end of each roll, contact is always maintained with the undercut rib on the cone. The rollers can roll only in correct alignment.

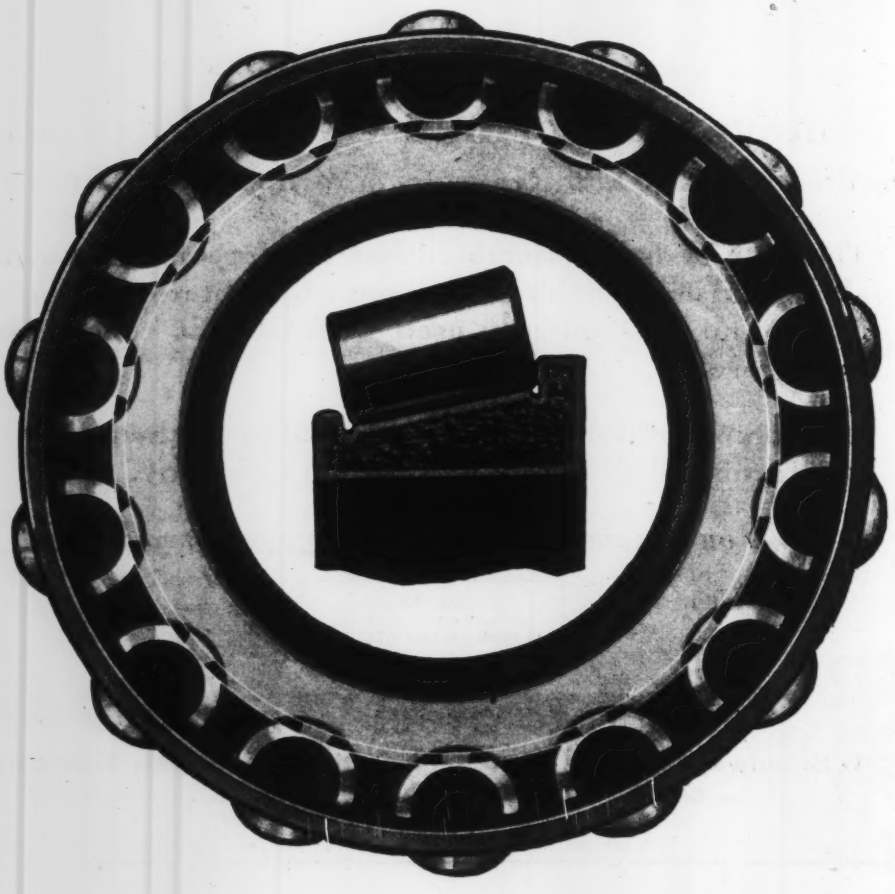
It is the one great modern bearing advance. It has produced new low records in the conquest of friction, largely because the bearing cage now virtually floats. It means that the higher radial and thrust capacity inherent in Timken tapered design is increased, and that it is continually realized under all working conditions.

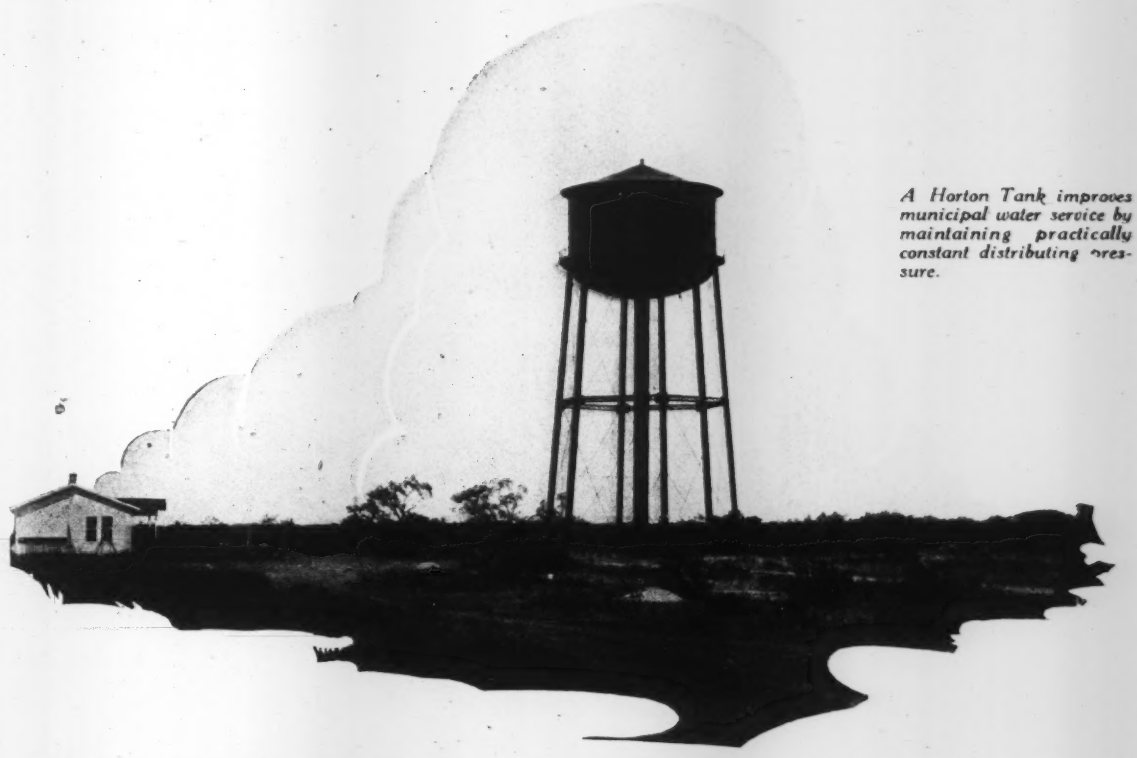
The Timken demonstration of *POSITIVE ROLL ALIGNMENT* will point the way to new possibilities in machine design to any engineering department. A request brings a Timken Industrial Engineer.

THE TIMKEN ROLLER BEARING CO., CANTON, OHIO

Technical information regarding bearing sizes and their mountings can be secured from the Timken Roller Bearing Service & Sales Company's Branches located in the following cities: Atlanta, Boston, Buffalo, Chicago, Cincinnati, Cleveland, Dallas, Denver, Detroit, Kansas City, Los Angeles, Memphis, Milwaukee, Minneapolis, Newark, New York, Omaha, Philadelphia, Pittsburgh, Richmond, St. Louis, San Francisco, Seattle, Toronto, Winnipeg

TIMKEN *Tapered Roller* **BEARINGS**





A Horton Tank improves municipal water service by maintaining practically constant distributing pressure.

Better Water Service for the community

At San Angelo, Texas, this 250,000-gallon Horton ellipsoidal-bottom tank maintains a steady, unvarying pressure on the mains. It has greatly improved the service of the San Angelo Water, Light and Power Company.

When a direct pumping system was used, pressures as high as seventy-five to eighty pounds were maintained, and still it was impossible to get satisfactory service to all parts of the community. The installation of the tank has improved distributing conditions so that satisfactory service is possible to all parts of the community at all times.

The Horton Tank, situated in the highest part of town, is filled at night during the off-peak demand. During the day pumping is discontinued, the tank is floated on the line and pump operating costs are materially reduced.

Mr. Taylor Rowe, the manager of the San Angelo Water, Light and Power Company, says of this tank, "It saves money and time and satisfies our customers."

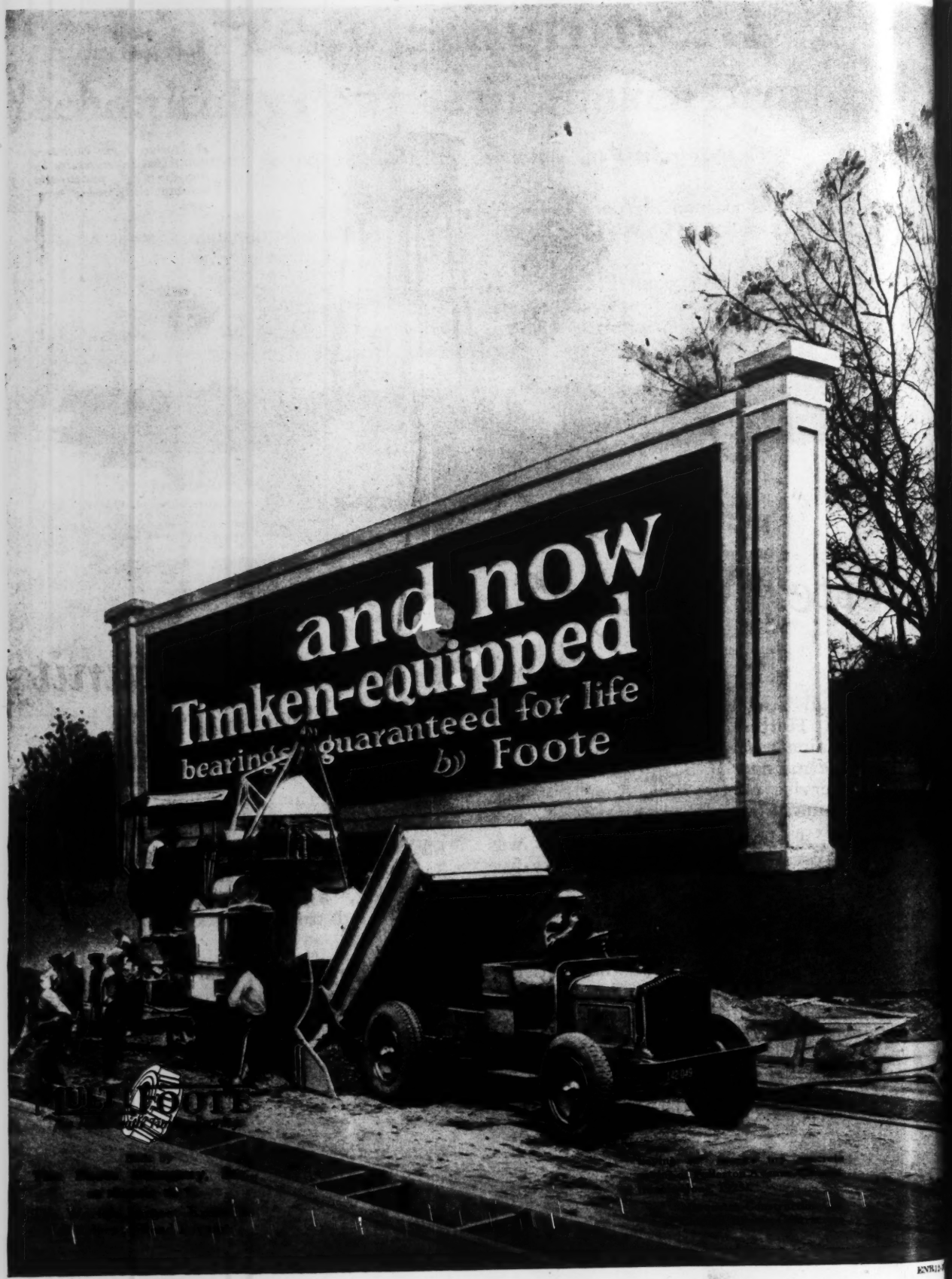
Full information on Horton Tanks for municipal service on request. Write to the nearest office.

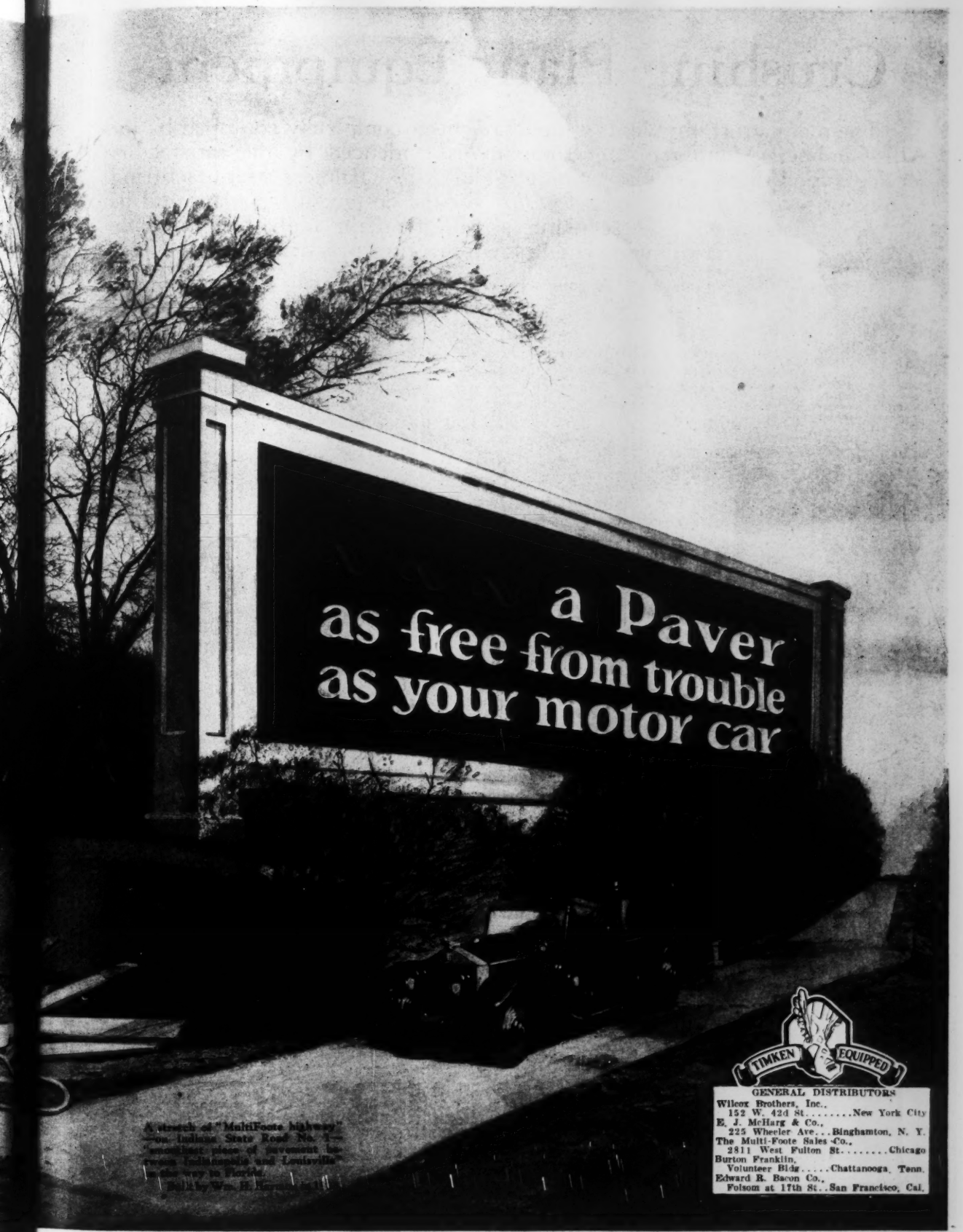
CHICAGO BRIDGE & IRON WORKS

CHICAGO	2101 Old Colony Bldg.
NEW YORK	3111 Hudson Terminal Bldg.
CLEVELAND	2201 Union Trust Bldg.
DALLAS	1602 Praetorian Bldg.
ATLANTA	1025 Healey Bldg.
SAN FRANCISCO	1020 Rialto Bldg.
HAVANA, CUBA	Apartado 2507

HORTON TANKS

EVB12-30Gru


and now
Timken-equipped
bearings guaranteed for life
by Foote


a Paver
as free from trouble
as your motor car
A stretch of "MultiFoote highway"
—on Indiana State Road No. 1—
"smoothest piece of pavement between Indianapolis and Louisville"
—the way to Florida.
Built by Wm. H. Kenny Co.
TIMKEN
EQUIPPED
GENERAL DISTRIBUTORS
Wilcox Brothers, Inc.,
152 W. 42d St.....New York City
E. J. McHarg & Co.,
225 Wheeler Ave...Binghamton, N. Y.
The Multi-Foote Sales Co.,
2811 West Fulton St.....Chicago
Burton Franklin,
Volunteer Bldg.....Chattanooga, Tenn.
Edward R. Bacon Co.,
Folsom at 17th St..San Francisco, Cal.

NR12-30Gray

Crushing Plant Equipment

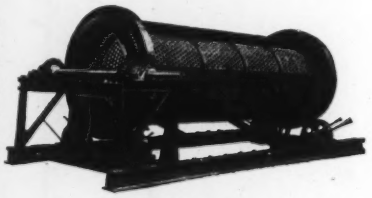
The many crushing plants which have been completely equipped by the Allis-Chalmers Manufacturing Company is evidenced by the satisfactory service which these plants are giving. The Allis-Chalmers Manufacturing Company takes the entire *responsibility* for the design of the plant and its equipment. These plants are built on the highest engineering standard following the best engineering practices.

Our Engineers are at your service to make complete installation drawings

Gates No. 27 Gyratory Crusher, having two openings, each 54 in. x 141 in.

The Gates Style K Crusher which has been developed in all sizes, is the result of 40 years' accumulated experience of the engineers and designers of the Gates Iron Works and the Allis-Chalmers Mfg. Co.

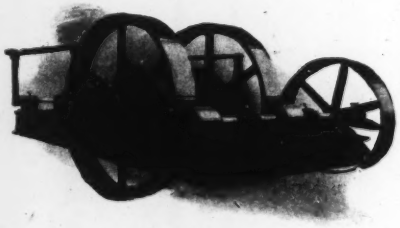
The durability, simplicity and efficiency of the Gates Patented All-Iron Frame Screens is unequalled by any other screen on the market.



All Iron Frame Screen

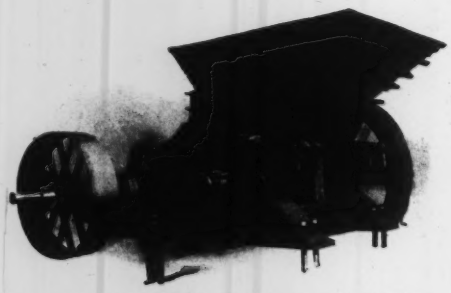
Jaw Crusher

The company has also developed in all sizes Jaw Crushers for crushing copper ore, blast furnace flux and ballast stone.



Friction Hoist

Friction hoists are the simplest and most effective devices for handling dump cars in a crushing plant. They are constructed single and double friction, with a maximum drum diameter of 36 in.



60 in. x 48 in. Fairmount Type (or Single Roll) Crusher

The Fairmount Crusher is intended to crush limestone, dolomite, phosphate rock, magnesite and other less tenacious rocks. It is not suitable for, nor do we recommend it for granites, trap rock or other igneous rock.

Pulverator

The Allis-Chalmers Pulverator is a crushing and pulverizing machine designed on a new principle. It is designed as a crusher for the reduction of material from 3 inches or finer to a size of which all will pass a 20-mesh screen if necessary. The materials which it handles to advantage include limestone for cement making, concrete, agricultural purposes, etc., coal, shale, felspar, phosphate, rock, gypsum, bauxite, slag and similar substances.

Write for Our Bulletins.

ALLIS-CHALMERS PRODUCTS
Electrical Machinery
Steam Turbines
Steam Engines
Gas and Oil Engines
Hydraulic Turbines
Crushing and Cement Machinery
Mining Machinery

ALLIS-CHALMERS MANUFACTURING COMPANY

MILWAUKEE, WISCONSIN, U.S.A.

ALLIS-CHALMERS PRODUCTS
Flour and Saw Mill Machinery
Power Transmission Machinery
Pumping Engines-Centrifugal Pumps
Steam and Electric Hoists
Air Compressors - Air Brakes
Agricultural Machinery
Condensers

Visit BLAW-KNOX at the ROAD SHOW

It has always been the duty of the Blaw-Knox Company to provide time and labor saving equipment for better and more economical road construction.

The proof of Blaw-Knox leadership is clearly evidenced by the widespread use of its products throughout the entire road building field.

The Blaw-Knox Exhibit will appeal to Engineers and Contractors who are interested in improved and more economical road building methods.

We especially invite your attention to our INUNDATION exhibit—to discuss with us its application to the building of roads.

Learn how INUNDATION (in addition to its widespread use on general construction work) has also been used with wonderful results on road construction.

YOU WILL SEE over

THE BLAW-KNOX EXHIBIT

BINS (STEEL)

SELF CLEANING—portable bins—which take minutes for erection instead of days. See how any Batcherplant can be equipped interchangeably for measurement of aggregates, by volume, by weight or by Inundation.

BATCHERS
Volume and Weighing

Your present bin, whether it be built of wood, steel or concrete can be equipped with Blaw-Knox adjustable Volume Batchers, Weighing Batchers, or the Blaw-Knox Inundator for making constant concrete with the Inundation System.

INUNDATION

You will see how to increase your yield with no additional cost—how over-run of cement is prevented—how uniform concrete is obtained by absolute water control. Learn more about the Blaw-Knox Inundation System.

BUCKETS

Have a look into the workings of a husky Dreadnaught. Study its rugged build and thorough lubrication principles, and realize why we can say ABSOLUTELY GUARANTEED.

ROAD FORMS

Learn how easy it is to keep Blaw-Knox Road Forms in perfect alignment and grade. Study the ¼ inch thick lock joint, the "easy to clean" stake pockets—the one piece stake strap—the round stake—the reinforced construction.

STREET AND SIDEWALK FORMS

See how Blaw-Knox Steel Forms save time in form setting and eliminate labor and lumber waste when building curbs, integral base and curb sidewalks, and gutters.

CALCIUM CHLORIDE MACHINE

A machine which introduces the exact amount of calcium chloride into the batch to effect proper curing with greater speed and economy. It attaches to paver or can be used separately.

TURNTABLES

They save wear and tear on motor trucks, preserve carefully rolled subgrades and keep the paver and men busy with a steady flow of materials.

BUILDINGS

The Blaw-Knox Steel Building is ideal for housing men, materials and equipment. Permanent buildings which can be easily moved.

STEEL FORMS

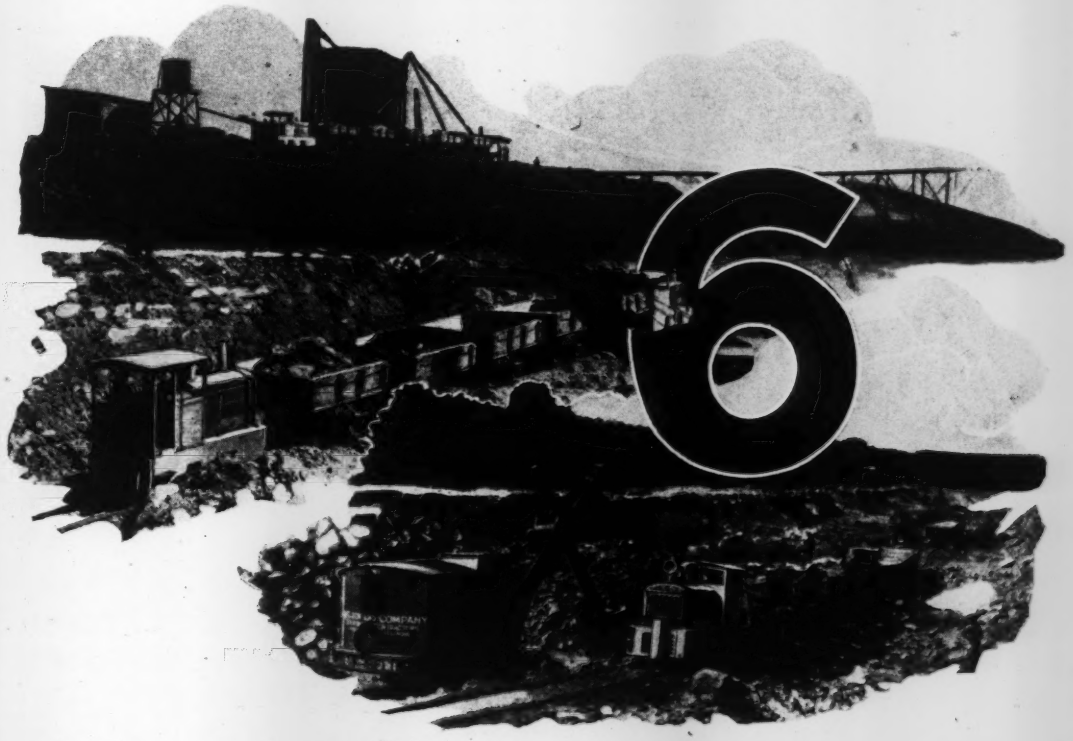
A set of Blaw-Knox Steel Wall Forms will pay for itself quickly. Better walls, foundations, etc. can be built at a much lower labor and material cost. Every contractor should own a set of Blaw-Knox Steel Wall Forms.

BLAW-KNOX COMPANY
601 Farmers Bank Building, Pittsburgh, Penna.

New York Detroit Baltimore Buffalo
Chicago Cleveland Birmingham Philadelphia

REG. U.S. PAT. OFF.
BLAW-KNOX

BLAW-KNOX



IT'S 6 "WHITCOMBS" THIS TIME

At Starved Rock on the big dam project six 12 ton Whitcomb locomotives are being used for hauling material to the dump. Four and five loaded cars are hauled over an 8 per cent grade from the excavation to the disposal pile, which is on a 35 foot higher level.

Again "Whitcombs" are proving their superiority— day in and day out they are keeping several shovels busy— their more horse power per ton of weight (10 to 16 horse power per ton) is necessary where faster operation is essential.

Put a "Whitcomb" on your work— watch how it speeds up operations— note that operators prefer "Whitcombs" because of their smooth operation— easier spotting of cars— faster starting and stopping—and comfortable cabs.

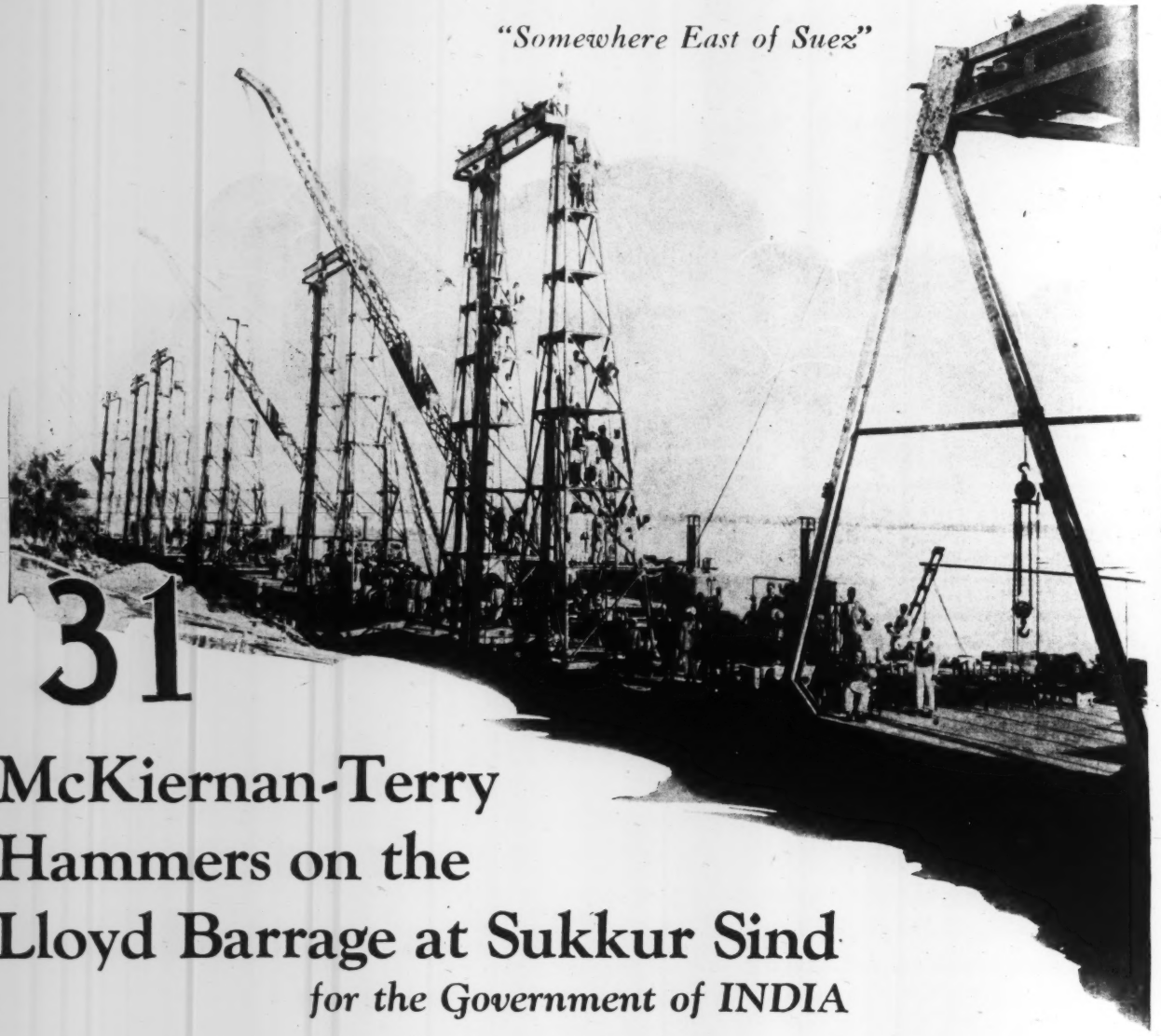
Faster operation means more profits— only "Whitcombs" can guarantee it. May we help you to select the proper size locomotive for your work? A card to our nearest office will bring a haulage engineer.

GEO. D. WHITCOMB COMPANY
ROCHELLE, ILLINOIS
Offices in principal cities

GASOLINE - STORAGE BATTERY - ELECTRIC

WHITCOMB
LOCOMOTIVES

"Somewhere East of Suez"



31 McKiernan-Terry Hammers on the Lloyd Barrage at Sukkur Sind

for the Government of INDIA

Fourteen No. 7's—four No. 9's—thirteen No. 9B-2's that is the total number of these Hammers now shipped for use on what will eventually be fifteen floating pile-driving plants built and supplied by the British Steel Piling Company of London (Sole McKiernan-Terry Agents outside North America). Six of these plants mounted in pairs on pontoons are shown in the above photo.

The McKiernan-Terry's are suspended in pendulum leads swinging from the runway between the heads of the frames.

When we say, "the sun never sets on a McKiernan-Terry Hammer" we *mean* it. They are world famous for driving and are shipped all over the world.

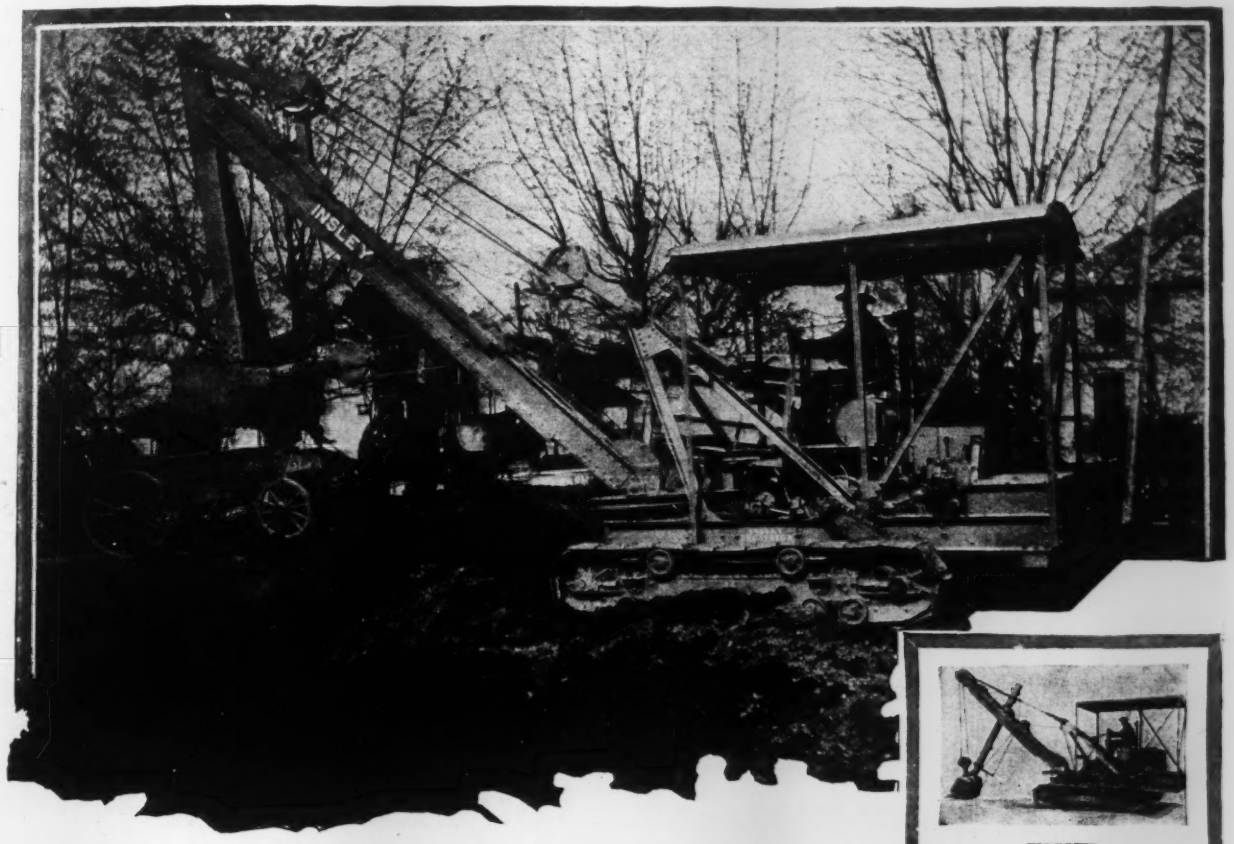
Write for descriptive Bulletin 35.

McKIERNAN-TERRY DRILL COMPANY
Pile Hammers—Lifting Jacks
13 PARK ROW, NEW YORK
Works at Dover, N. J.

Agencies in the following cities:
Boston, Chicago, Pittsburgh, Cleveland, Detroit, St. Paul, San Francisco, Columbus, O., New Orleans, Philadelphia, Portland, Ore., Jacksonville, Fla., Houston, Texas, Los Angeles, Calif., Kansas City, St. Louis, Atlanta.
Foreign Representatives: British Steel Piling Co., London, England.

McKIERNAN-TERRY

The Pioneer Double-Acting Pile Hammers



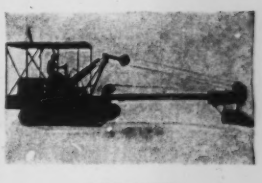
"A Money Maker"

J. W. BARTELS bought an Insley Excavator in April, 1926, and put it to work in Dayton, Ohio. He has kept it busy ever since, and has done all kinds of basement and cellar work. He reports that it will rip out old brick and concrete walls, will dig deep cellars and shallow ones, will work in any kind of soil, and will handle 450 cubic yards a day. After six months of ownership, he says that his Insley Excavator is "a job getter and a money maker." What more could be said?

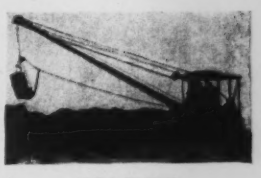
Mr. Bartels' experience is the same as that of many owners of Insley Excavators, that good work at a good price simply comes to them because they own the machine. It is a two-fold asset, first getting the job for you, then making money for you.

You owe it to yourself to investigate the Insley Excavator. It will be worth your while. Write us for Catalog 49.

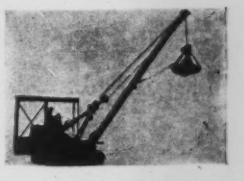
SHOVEL



SKIMMER



DRAGLINE



CRANE

INSLEY MANUFACTURING CO.

Engineers and Manufacturers

INDIANAPOLIS

THE INSLEY EXCAVATOR

for SHOVEL • DITCHER • CRANE SKIMMER AND DRAGLINE WORK

IT'S COMING—ARE YOU PREPARED?

Most of the road work of the future will not be paving, but **repaving.** Even today, this condition is forcing contractors to solve the problem of how to remove the old pavement without losing money.

Almost any shovel can scratch along and do the work after a fashion, but this is too costly.

The McMyler-Interstate one-yard shovel, with its bigger boiler and engines, and a wealth of controlled power, has demonstrated its ability to rip and gouge out asphalt, brick or concrete at profit-making speed.

The 6″ x 8″ hoisting engine and the 5″ x 5″ crowding engine, fed by the 48″ x 90″ boiler at 150 lbs. pressure comprises the huskiest power plant built into any one-yard shovel, and from the steel-sleeved center-pin to the full manganese steel dipper, it is built to handle this extra power.

This shovel is tied up with your future. It is built to build your business.

May we tell you more about it?

Cranes and Shovels
Crawler Tractor
Locomotive
Gas Electric
Steam
Clam-shell Buckets

C-2-158

McMyler-Interstate

CLEVELAND, OHIO

BRASS PIPE Puts FLOW in the Faucets

NO GROWLING at slow-running faucets when your home is BRASS piped!

Full flow every time you turn on a tap. And a *clean* flow, because BRASS does not rust.

BRASS pipe costs little more than the best corrodible pipe and it ends rust troubles.

COPPER & BRASS
RESEARCH ASSOCIATION
25 Broadway, New York

Write for a useful book on plumbing. There's no charge

Very True

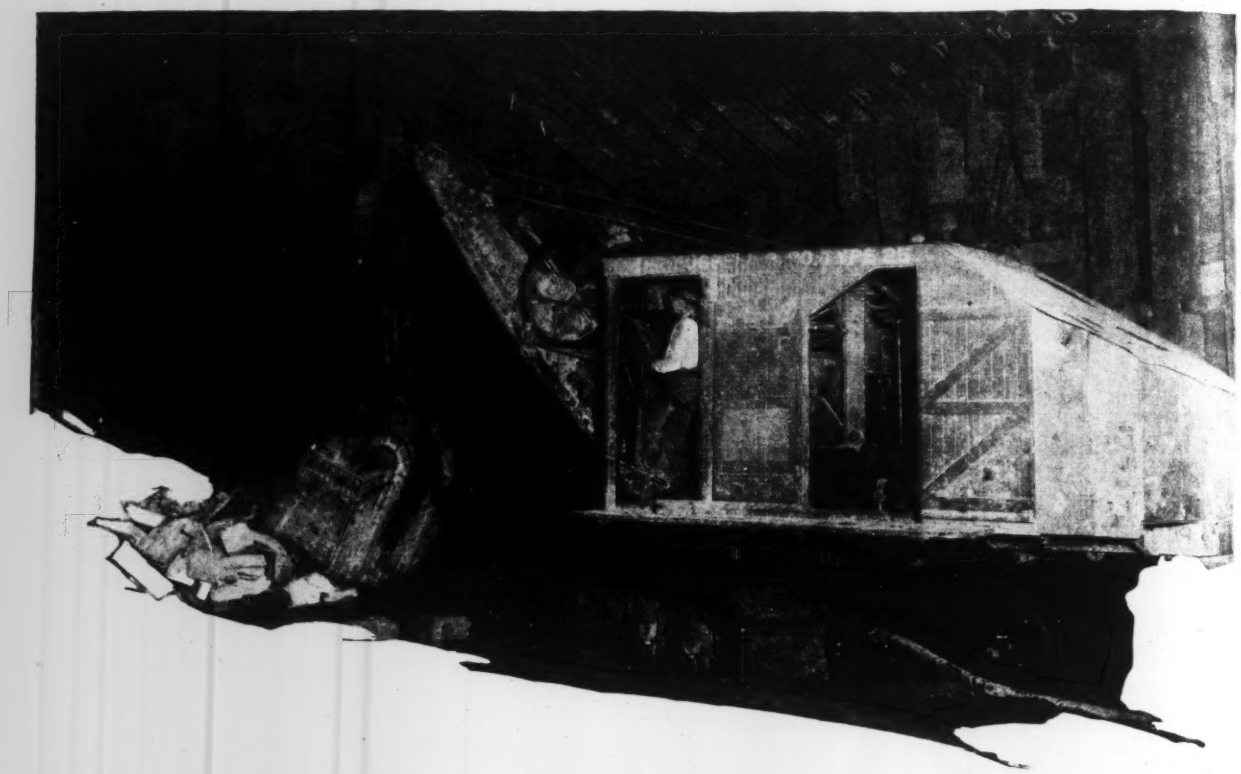
But why not go further and get 100 percent results by using on your main supply lines—

LOCK JOINT
Reinforced
Concrete Pipe

—the pipe of maximum service

Sewer
Pressure
Subaqueous

LOCK JOINT PIPE CO.
Established 1905
9 Rutledge Ave.,
Ampere, N. J.



Hand in hand with progress—

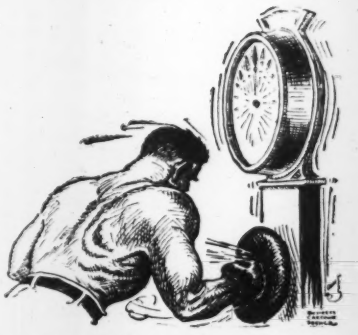
The experienced digger understands value

In the busiest construction areas you'll find many a Massillon at work digging a new foundation. Where progress is greatest and construction must be carried on rapidly with modern equipment, the Massillon proves its value as it has in all its fields.

MASSILLON
STEAM SHOVELS

Built by
Steam Shovel Division

The Russell & Company **Massillon, Ohio, U.S.A.**



Built To Stand all you can give it

LORAIN 75
Reason No.
7

YOU don't need to pull your punch when you use a Lorain 75.

Give it all you've got in the way of tough work. Rip up that old pavement, gouge into the shale, juggle the huge rocks about, work it hard, push it to the limit. It's built to take it and come back for more.

One of the first needs of today in shovel or crane design is endurance. You probably know that from sad experience. All other good features of your machine can't pay profits while it is laid up for repairs.

Power, strength, endurance, was dinned into the ears of Thew engineers while designing the Lorain 75 till the outcome was even beyond our expectations.

We couldn't smash the first one in months of the most vicious tests. Owners from coast to coast will now say the same about them.

Do you want that kind of a shovel? Read how stick-to-it-iveness and other features are built into this machine.

Send for the Lorain 75 bulletin.

Winning a Battle Without Firing a Shot

WHEN Williamson, Howard and Smith, contractors of Youngstown, Ohio, tackled the new Youngstown to Liverpool state road they bit off a big mouthful—and they knew it.

That's why they looked 'em all over before they picked their shovels.

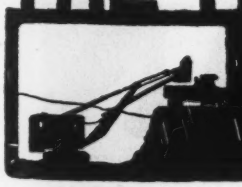
Virgin territory, timbered hillsides, deep cuts through sandstone strata, here was a job for the huskiest fighting shovels procurable.

Two Lorain 75 machines were chosen. After a couple of months on the kind of digging shown above, Mr. Smith was asked how the Lorain 75s were behaving.

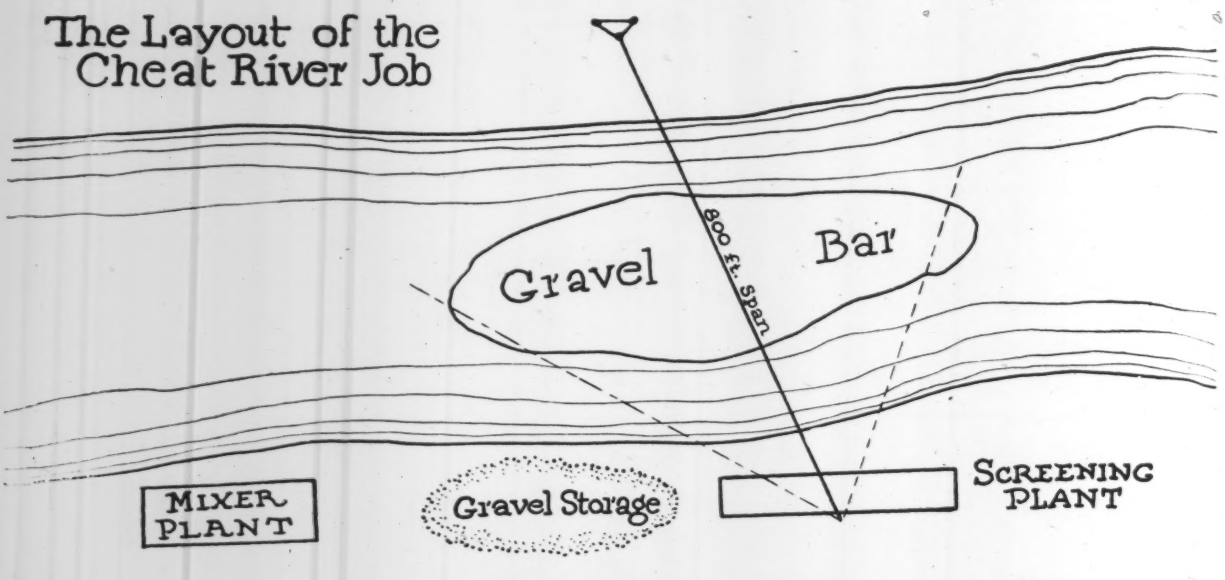
His reply was to the point. "15,000 yards a month for each shovel in that kind of stuff. No other shovel ever made could do it. The Lorain 75 is in a class by itself, that's all."

The above rock cut was made by one of the shovels alone without the help of a single blast. Is it any wonder that its owners are jubilant?

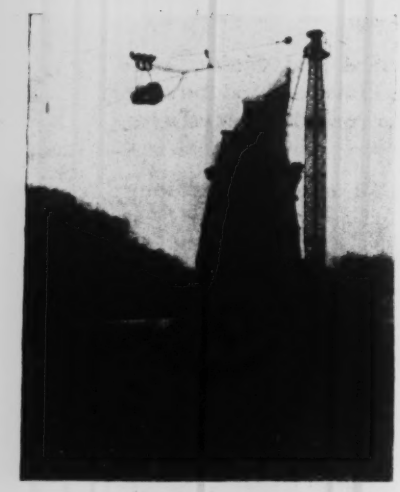
THE THEW SHOVEL COMPANY
LORAIN, OHIO



Shovels-Clamshells-Draglines
Steam, Gasoline or Electric-Mounted On
The Center Drive Truck



How a Sauerman Cableway Cut the Cost of Digging 100,000 Yards of Gravel at Cheat River



The Sauerman Slackline Cableway bringing in a load of gravel to the plant on the Cheat River job. The cableway had an 800-ft. span, and excavated nearly 100,000 yards of gravel in 6 months.

On a concrete dam and power house job on the Cheat River, West Virginia, the contractors found that they could use a bar of gravel in the river as a source of concrete material.

Early in June the concreting work was started. In order to complete that part of the work before Winter set in, it was necessary to pour 25,000 yards of concrete per month. To do this, a steady flow of aggregates was essential.

An 800-ft. span, 2-yard Sauerman Slackline Cableway was selected to excavate and deliver the material to the screens.

During the period of operation, the Sauerman Cableway handled nearly 100,000 yards of material, containing shale, large boulders, and sand. Out of this, 65,000 yards of finished gravel was produced—at a cost of 20 cents per yard.

The performance of the Sauerman Slackline Cableway on this job is a good example of its capability. Pit and gravel operators all over the country have found that it produces fast, efficiently, and at a low cost.

The simplicity of the outfit has much to do with the low cost of operation. One man does all the operating, and takes care of the small amount of maintenance as well.

And this Cableway performs three distinct operations without the use of intermediate machinery. It *digs, elevates, and conveys.*

In addition, the Sauerman Cableway can be adapted to suit practically any situation. It will operate over a long span and wide radius—and it digs just as readily under water as in a dry pit.

If you are interested in any kind of a big area digging job, or in pit and gravel operations, send for a copy of this month's Sauerman News. It contains detailed descriptions and layouts for a number of jobs.

SAUERMAN BROS., Inc.
432 S. Clinton St., Chicago, Illinois
Representatives in 29 Principal Cities

SAUERMAN
SLACKLINE CABLEWAYS : POWER DRAG SCRAPERS

BYERS "BEAR CAT" CRANE

The NEW BEAR CAT

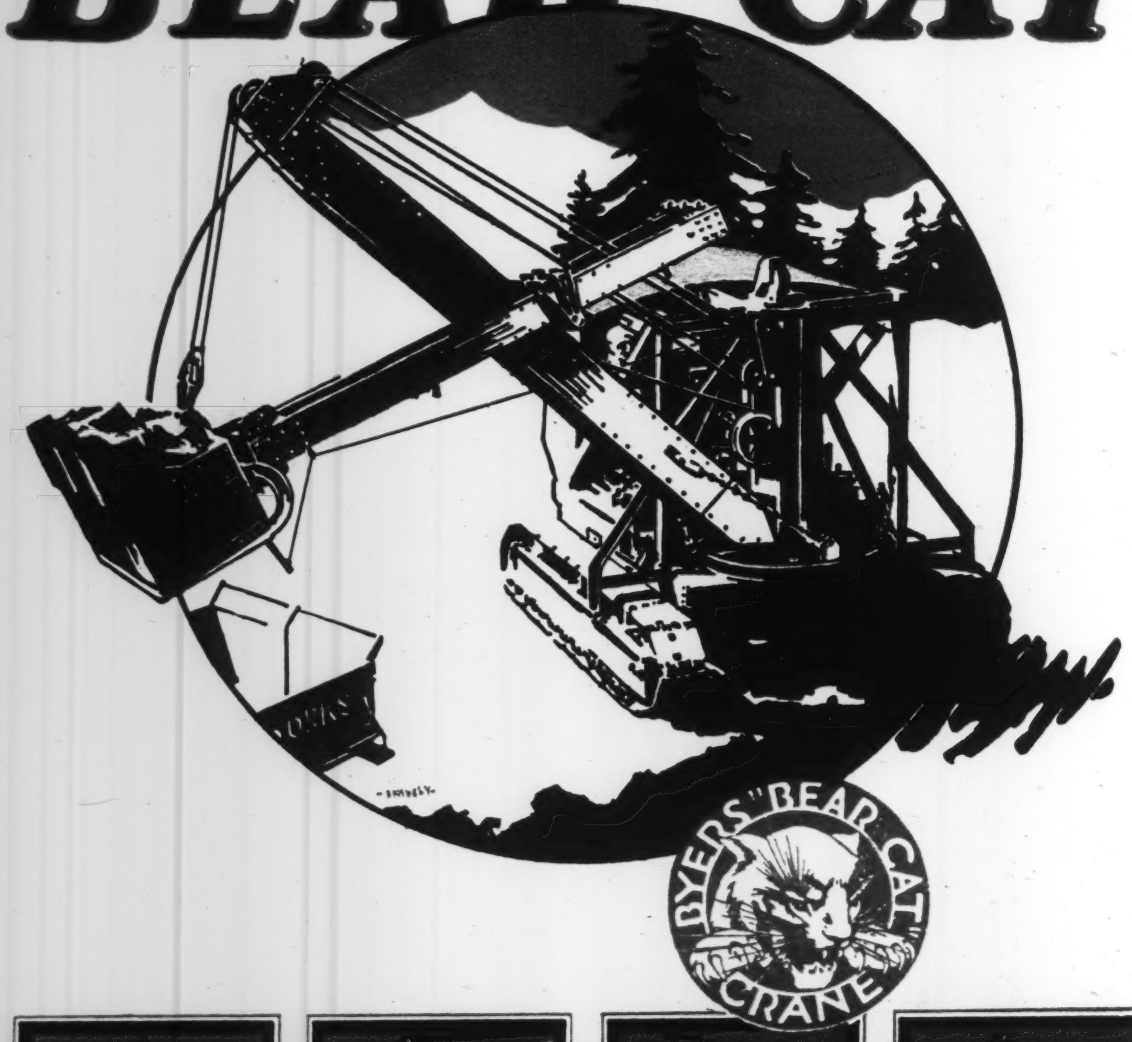
SEE IT AT THE ROAD SHOW or *Send for the New Catalog*

Byers Machine Co., Ravenna, Ohio
I want to see a copy of the New Bear Cat Catalog.
The kind of work I am particularly interested in is

Name _____
Address _____
City _____ State _____

BBB 13-8-28

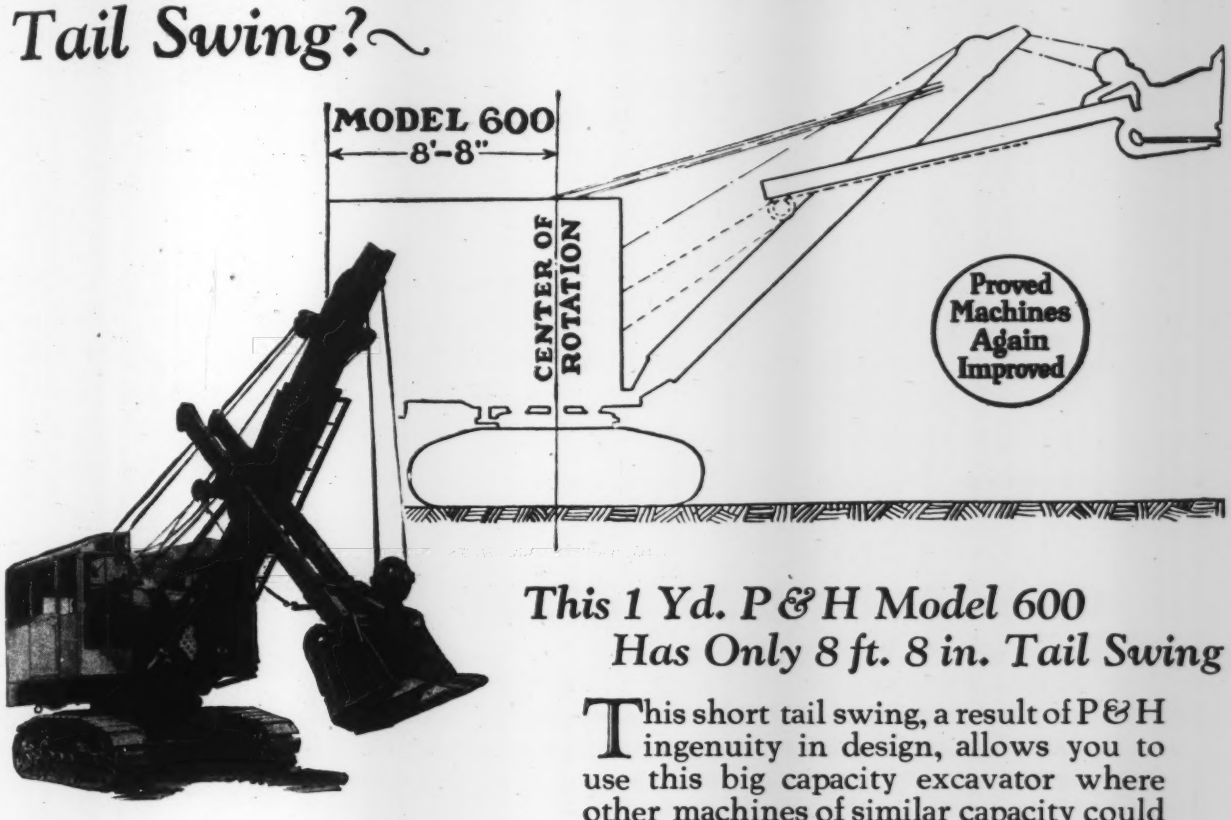
BYERS BEAR CAT



THE ALL PURPOSE ONE MAN CRANE

The New Bear Cat Crane Book is as up-to-date, original and interesting as the Bear Cat itself. Crammed full of pictures — information charts — real facts that will help *your* business. Easy to get; just sign and mail the coupon on the other side of this sheet. Mighty worth-while — no obligation to you.

Do You Have to Move a Lot of Extra Dirt Just Because Your Machine Has a Long Tail Swing?



This 1 Yd. P&H Model 600 Has Only 8 ft. 8 in. Tail Swing

This short tail swing, a result of P&H ingenuity in design, allows you to use this big capacity excavator where other machines of similar capacity could not be employed because of their longer tail swing.

In close quarters it is not necessary with a P&H to move a lot of extra material—[work that you don't get paid for]—in order to give the machine room to swing around.

Get our latest bulletin 61-X
It not only is the most complete bulletin on gasoline excavators —but contains detailed information on every part and feature of the new all-steel 1927 models.

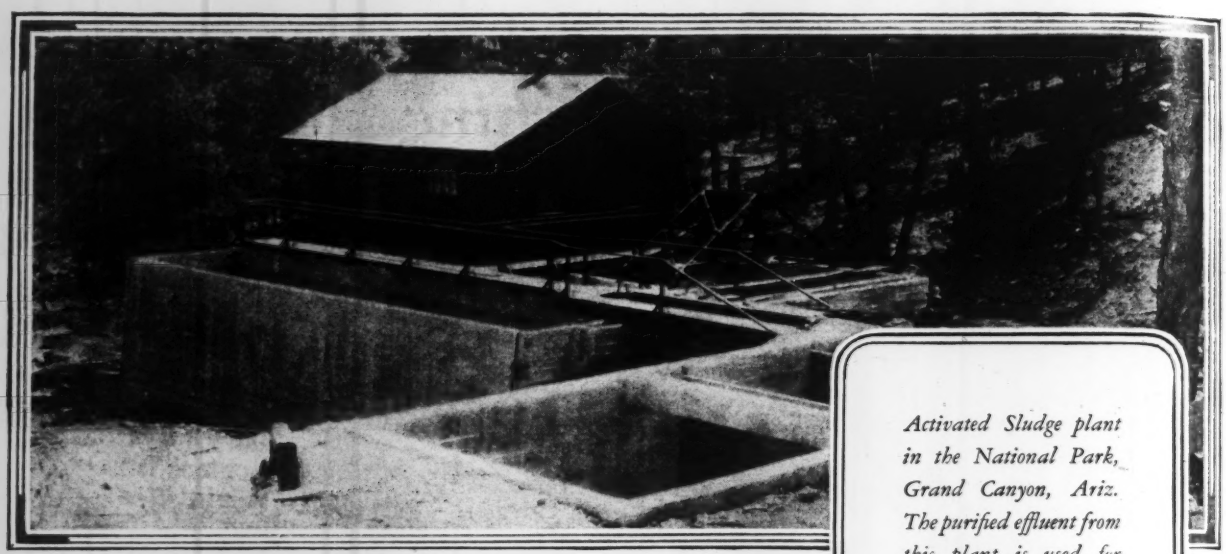
HARNISCHFEGER CORPORATION
Successor to
PAWLING & HARNISCHFEGER CO.
Established in 1884
3804 National Ave., Milwaukee, Wis.

New York, Chicago, Pittsburgh, Jacksonville, Philadelphia, Kansas City, Memphis, Dallas, Detroit, Charlotte, Birmingham, Portland, Indianapolis, San Francisco, Los Angeles, Seattle, Atlanta, Tampa, Miami

WAREHOUSES AND SERVICE STATIONS
Philadelphia, Memphis, San Francisco, Los Angeles, Jacksonville, Seattle, Miami

P&H EXCAVATORS

UNIT CAST STEEL CONSTRUCTION



Activated Sludge plant in the National Park, Grand Canyon, Ariz. The purified effluent from this plant is used for irrigation, etc.

In the Heart of the Grand Canyon—

Dorr Equipment

Why are Dorr Clarifiers found in all types of sewage treatment plants ranging in size from the mammoth North Side plant at Chicago to the compact little plant pictured above?

The explanation is simple.

Dorr Clarifiers used as sedimentation units continuously remove the settled solids from the basins, produce a uniformly clarified effluent, and eliminate possibility of septic floating solids.

Its use cuts down the number of sedimentation units required, and allows for simple shallow tank construction.

These are some of the reasons that have prompted the installation of over 150 clarifiers throughout the country.

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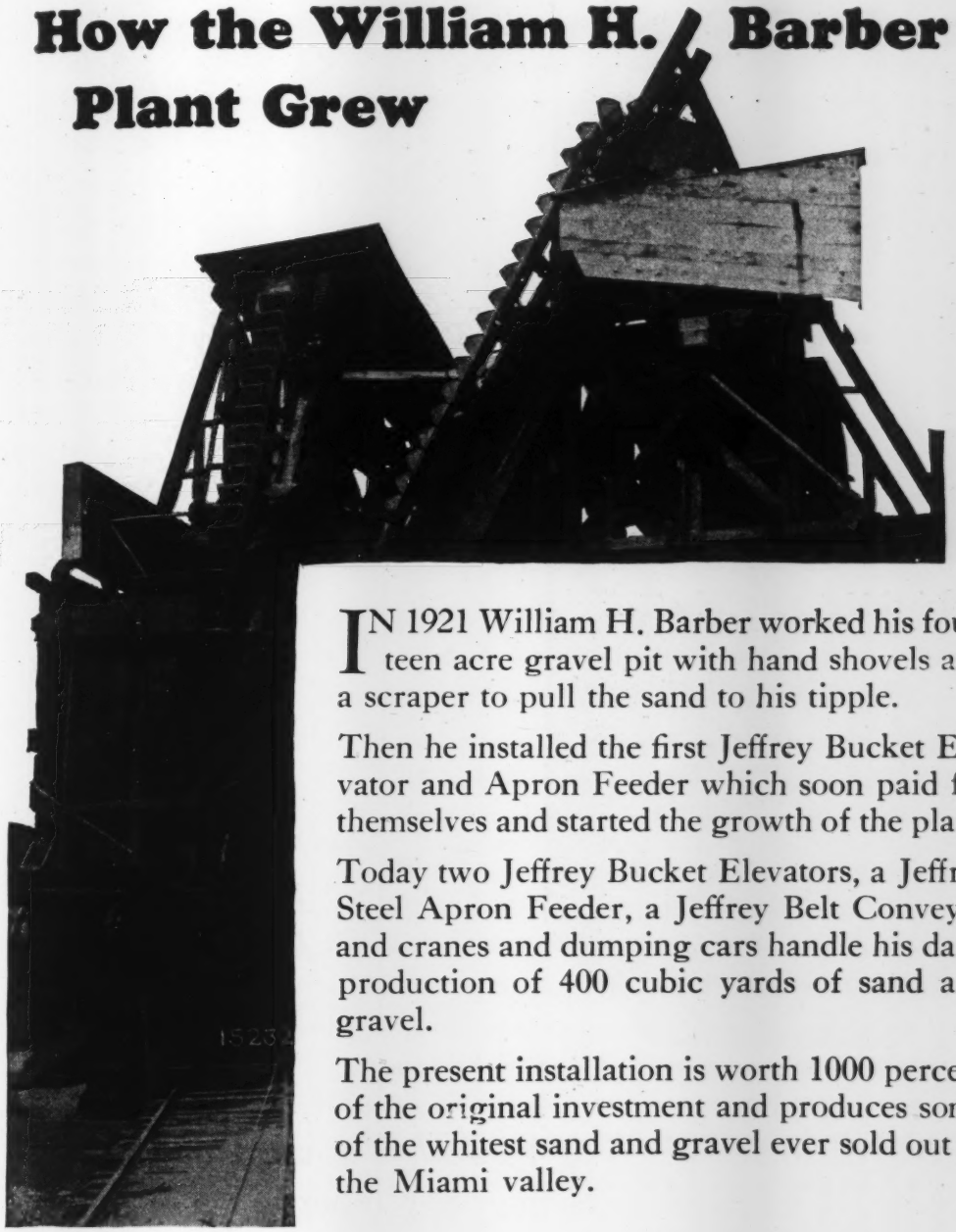
INVESTIGATION TESTS DESIGN EQUIPMENT

How the William H. Barber Plant Grew



IN 1921 William H. Barber worked his fourteen acre gravel pit with hand shovels and a scraper to pull the sand to his tipple.

Then he installed the first Jeffrey Bucket Elevator and Apron Feeder which soon paid for themselves and started the growth of the plant.

Today two Jeffrey Bucket Elevators, a Jeffrey Steel Apron Feeder, a Jeffrey Belt Conveyor and cranes and dumping cars handle his daily production of 400 cubic yards of sand and gravel.

The present installation is worth 1000 percent of the original investment and produces some of the whitest sand and gravel ever sold out of the Miami valley.

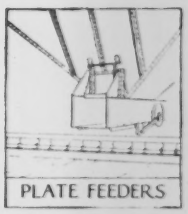
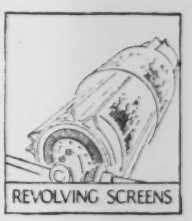


PLATE FEEDERS

BELT CONVEYORS

SAND SETTLING TANKS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"Transverse joints should be provided," *says* Prof. Arthur H. Blanchard

ARTHUR H. BLANCHARD, *Professor of Highway Engineering and Highway Transport, University of Michigan, Ann Arbor, Mich. For over twenty-five years Professor Blanchard has been actively associated with highway engineering, both in this country and abroad, and his advice as a Consulting Highway Engineer is widely sought.*

IN HIS BOOK entitled "Elements of Highway Engineering," under the chapter on Cement Concrete Pavements, Arthur H. Blanchard, Professor of Highway Engineering and Highway Transport, University of Michigan, Consulting Highway and Traffic Engineer, Litigation Expert, and Highway Transport Consultant, makes the following statement about expansion joints:

"Transverse joints should be provided. There will be more or less contraction and expansion of the concrete due to changes of temperature, variation in the moisture content of the concrete, and, in some cases, variation in the condition and character of the subgrade. If expansion joints are not present, when the concrete contracts the tensile strength of the concrete may be exceeded and the pavement will crack. If the expansion produces forces that are in excess of the compressive strength of the concrete, the concrete may crush at cracks. It is obvious that the joints should be filled with a material which will expand and contract with the movements of the pavement."

Carey Elastite Expansion Joint consists of two substantial layers of asphalt-saturated felt, between which is interposed a heavy body of asphalt compound, the whole being inseparably bonded together in sandwich form by mechanical pressure. Behind it is the reputation of The Philip Carey Company—a reputation based on fifty-three years of successful service to the building trades.

Successful engineers and builders have long recognized Carey Elastite Expansion Joint as the ideal "material which will expand and contract with the movements of the pavement." Experience has indicated that one and one-half inches of Carey Elastite Expansion Joint per 100 feet of pavement—or a one-half inch joint placed about every thirty feet—gives uniformly successful results. Write for full details.

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EXPANSION JOINT

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IN THESE DAYS you hear of many advantages of dealing with a "national organization." How great is this advantage to you and to your shop?

How does it benefit you that Oxweld has 36 districts with service men in every district and 22 apparatus repair stations strategically located in every part of the country?

This is the answer.

Oxweld's national organization means high-class equipment. No mediocre apparatus could create or support a national organization—and 36 district offices and 22 apparatus repair stations mean service without which no oxy-acetylene equipment can be used most efficiently.

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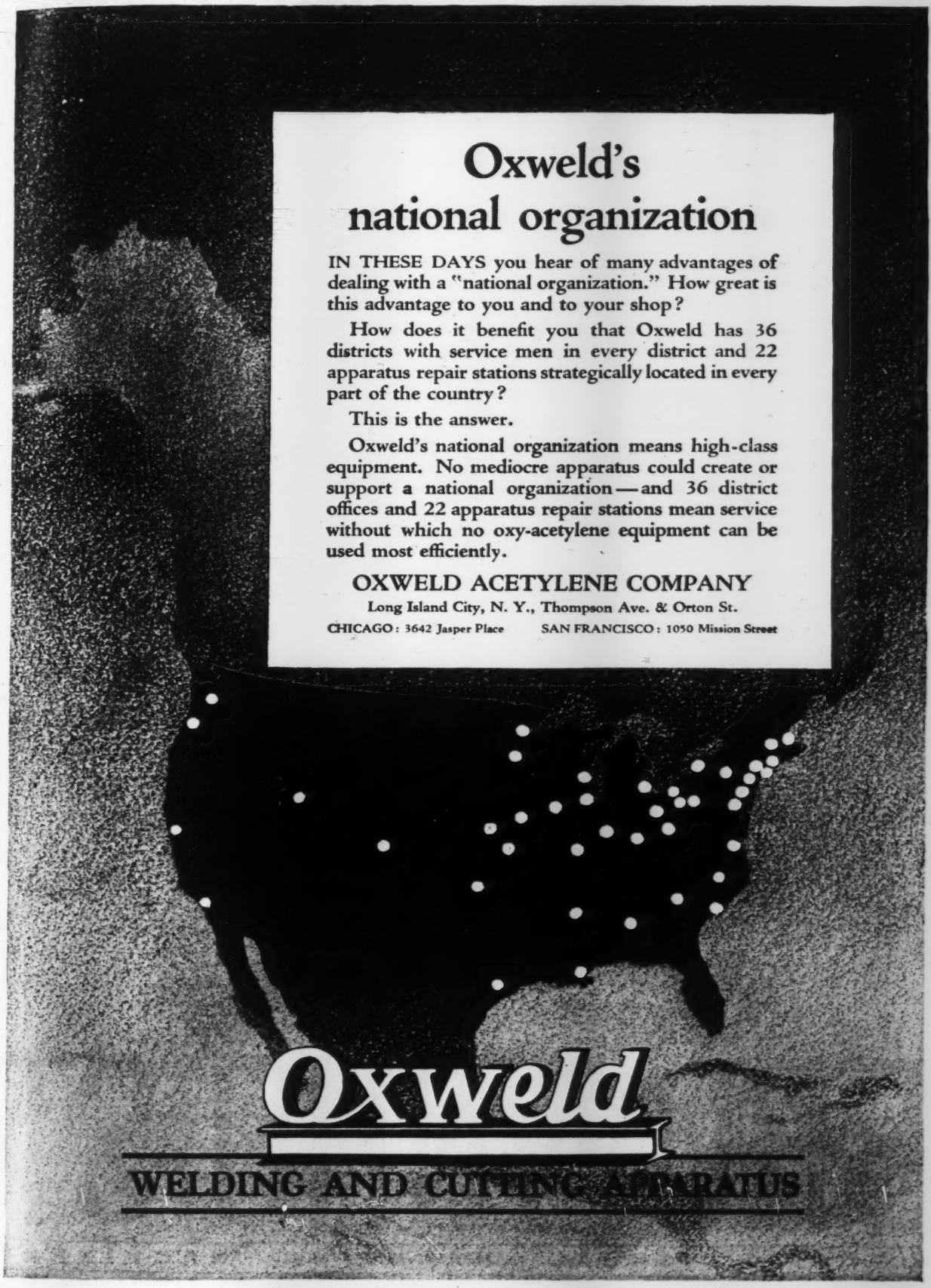
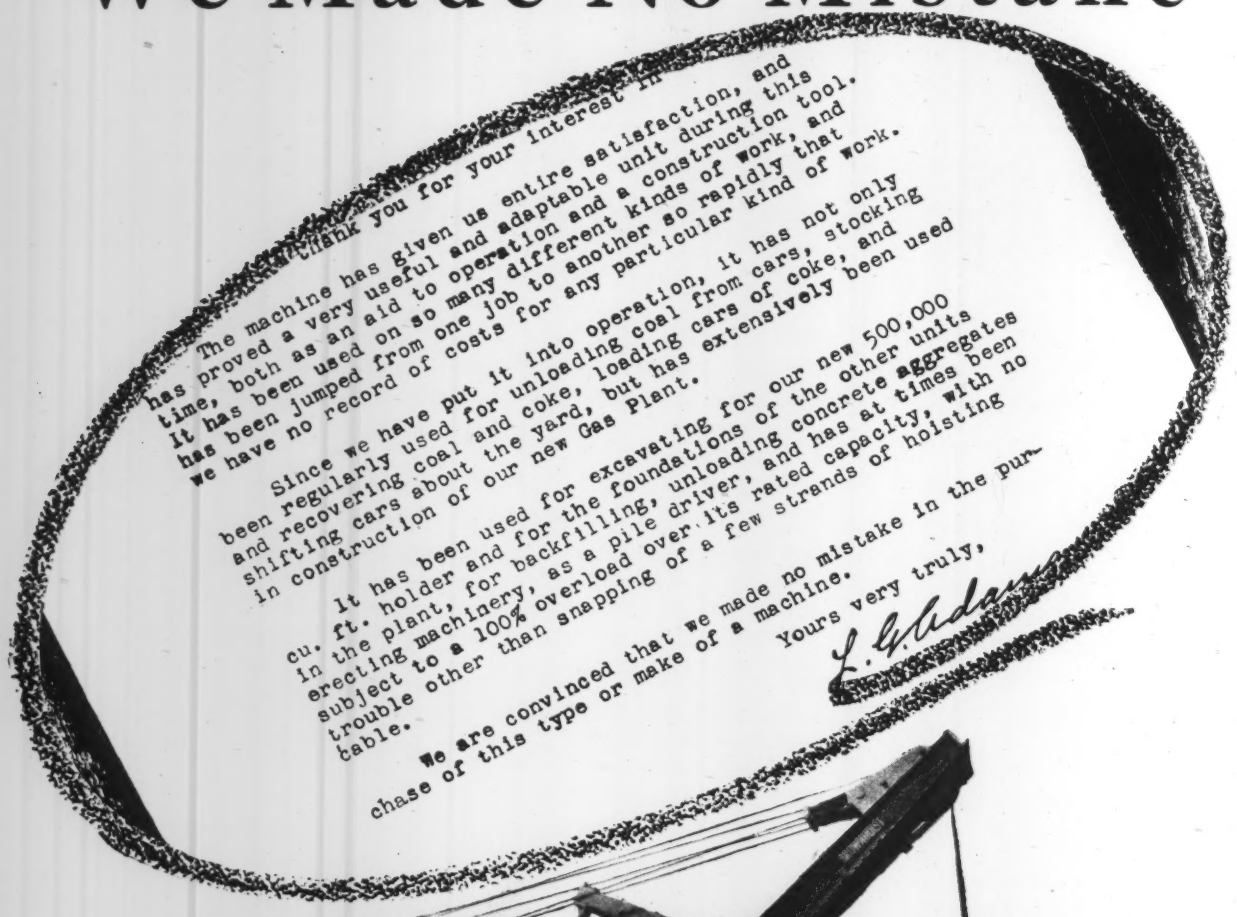


"We Made No Mistake"



Thank you for your interest in

The machine has given us entire satisfaction, and has proved a very useful and adaptable unit during this time, both as an aid to operation and a construction tool. It has been used on so many different kinds of work, and has been jumped from one job to another so rapidly that we have no record of costs for any particular kind of work.

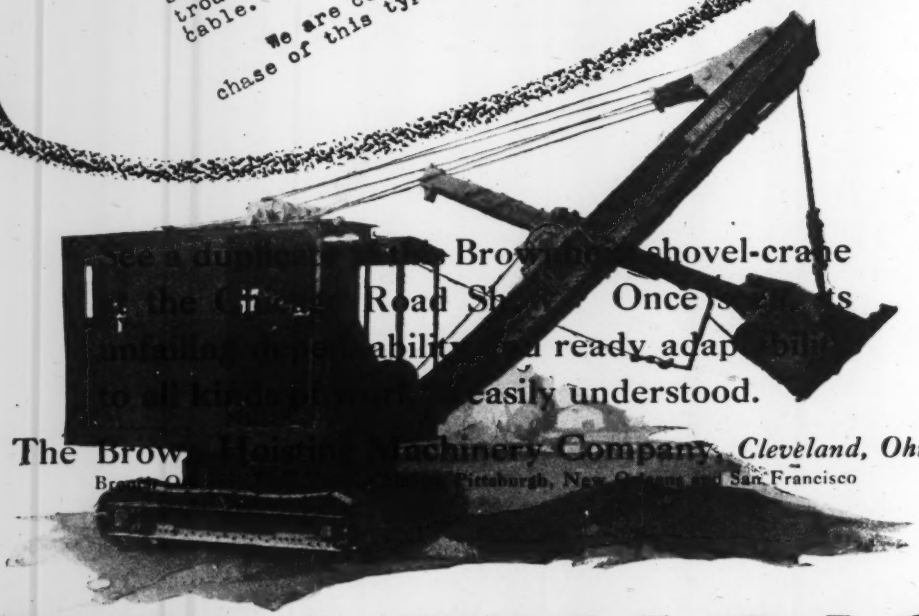
Since we have put it into operation, it has not only been regularly used for unloading coal from cars, stocking and recovering coal and coke, loading cars of coke, and shifting cars about the yard, but has extensively been used in construction of our new Gas Plant.

It has been used for excavating for our new 500,000 cu. ft. holder and for the foundations of the other units in the plant, for backfilling, unloading concrete aggregates erecting machinery, as a pile driver, and has at times been subject to a 100% overload over its rated capacity, with no trouble other than snapping of a few strands of hoisting cable.

We are convinced that we made no mistake in the purchase of this type or make of a machine.

Yours very truly,

L. G. Adams



...See a duplica... The Brow... shovel-crane ...the C... Road Sh... Once ... its unfailing ... abili... ready adap... abili... to all kinds ... easily understood.

The Brow... Hoisting Machinery Company, *Cleveland, Ohio*

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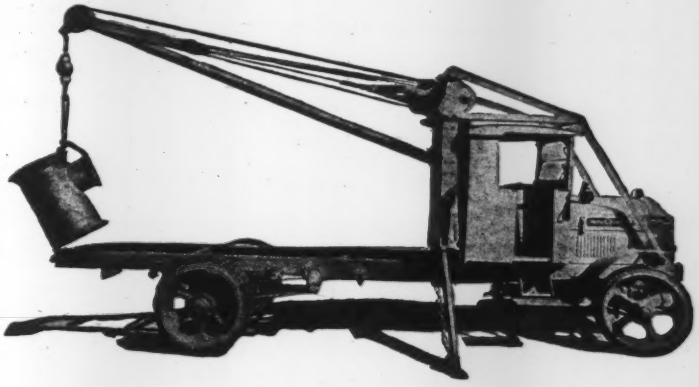
BROWNHOIST

GOOD MATERIAL HANDLING MACHINERY

ATIA

AUTO TRUCK DERRICK



Hoists - - Loads - - Digs

CONVERT your truck into a TIME and LABOR saver with this derrick. It will serve many purposes if mounted on a chassis of sufficient tonnage.

With HOOK or CHAINS, it lifts pipes, girders and other solid objects. With LAZY TONGS it handles barrels, bales, boxes, crates, etc. With CLAM SHELL or ORANGE PEEL bucket loads stone, gravel, sand, coal and other soft or loose material.

ONE OPERATOR standing on truck has absolute control over the load and its placement.

The construction of this derrick is such that it can be knocked down, packed compactly and shipped anywhere. Our installation instructions make its installation so simple that it can be set up ready for immediate use at any machine shop or garage having proper facilities.

Sheaves are bushed with self-oiling bearings—interior gears and reverse mechanism are made from chrome nickel steel with hardened and ground dental clutches running on ball bearings in enclosed grease-filled gear boxes. Gear units are easily removed for inspection or replacement. Derrick has large factor of safety over specified capacity. Protection from breakage due to overload is insured by patented slipping clutch set to lift slightly in excess of rated capacity.

Operation of clam or orange peel bucket is simple, any unskilled workman can operate this machine and it will also do the work of vertical hoists on trucks for raising and lowering body, and in connection with orange peel bucket can be used by departments of public works for catch basin cleaning and sewer operation.

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Derrick can also be furnished for raising and lowering load, boom to be slewed by hand, by aid of niggerhead. Prices and fuller details will be sent on request. Certain territory still available for first class Distributors. Correspondence invited.

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Also ATIA Ash and Garbage Removal Bodies

PORTABLE CONVEYORS

When you buy a Portable Belt Conveyor, *buy a good one*—you'll save money! A Haiss machine with BALL BEARINGS BELT ROLLERS will carry its load with less drag and stay on the job so many times as long, that you just can't afford to put your money in the old style of machine. Particularly when you can buy a Haiss *at no higher cost.*

We have been building ball-bearing-belt-roller conveyors for years—and our repair business on bearings is *nothing at all.* That proves how well they stand up. The factory lubricant lasts for years—you don't even have to oil them.

For general service you cannot put your money in a better conveyor than the Haiss Troughing Belt shown here.

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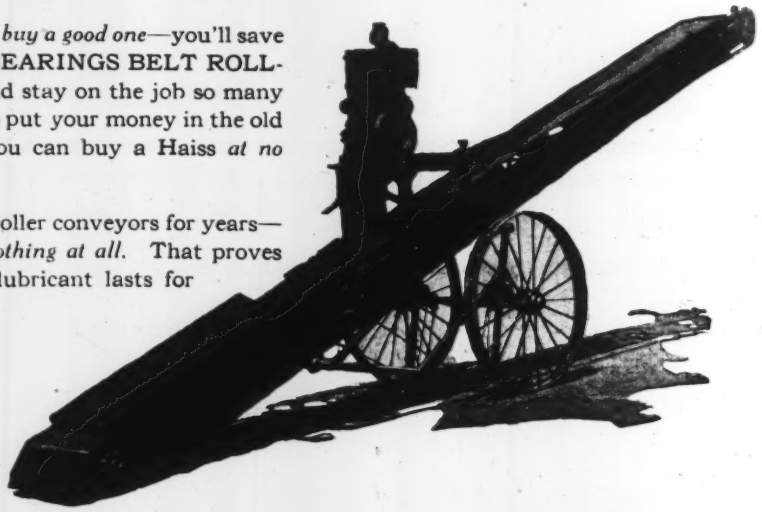

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Clam Shell --Buckets--
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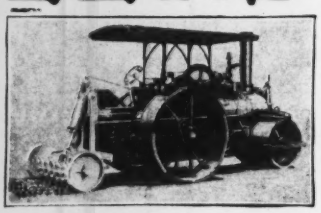
Buffalo - Springfield Pressure Cylinder Scarifiers can be built on new rollers or attached in the field to rollers already in service.



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Durability *Simplicity* ACME *Economy* *Satisfaction*

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The Standard of Service

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Portable Belt Conveyors
Self-Feeding Bucket Loaders
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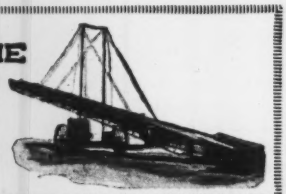

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And 3 Yard—Bottom Dump Trailer
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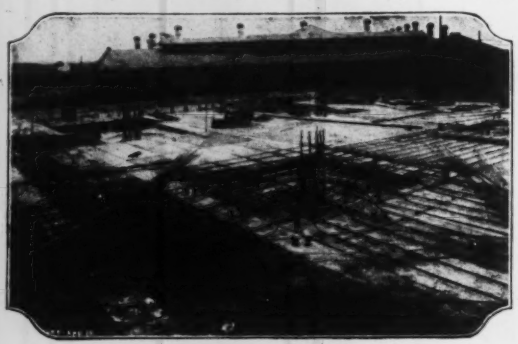
A double fold of metal under the bar holds the bar away from the form with strength enough to support workers.



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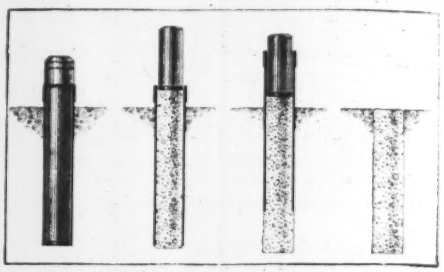

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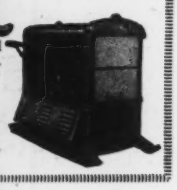

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Creosote Oil
Docks for Ocean Vessels

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IRVING
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FLOORING

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LONG ISLAND CITY, N.Y. U.S.A.
Established 1902

P-130

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"Nothing to do but TURN"

For speed—for surety—for flexibility and adaptability Get these safe, sure, quick wrenches—speed up the job, safeguard your men's lives and get better work. Just try one. Write for our Catalog R. It will pay you.

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The FIRST COST is the LAST
AMERICAN CEMENT TILE MANUFACTURING CO.
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Counterbalanced-Truckable
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FLAT SHEETS, readily handled, quickly placed—Steelcrete, the ideal reinforcement. Saves, pays.
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THE TRUSCON LABORATORIES — DETROIT

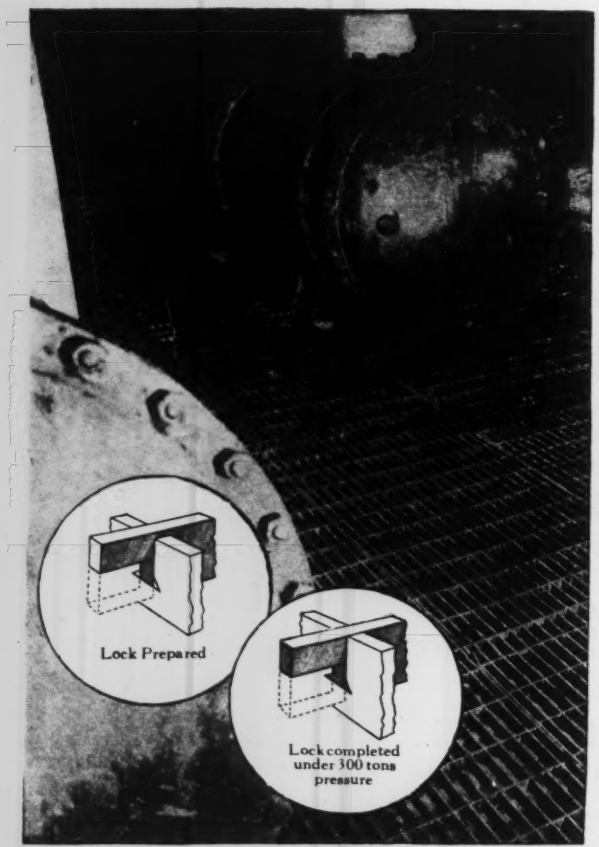

Illustration shows MITCO Grating around the Feed Water Heaters in the Super-Power Station of the Ohio River Edison Company, Toronto, Ohio. Designed and constructed by Stevens & Wood, Inc., New York City.

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There are many advantages to MITCO Interlocked Steel Grating as a flooring material for industrial plants. It is non-clogging and non-slipping. Oil, grease or water do not make it slippery. MITCO Interlocked Steel Grating stands the strains and stresses of heavy loads. It provides excellent traction for wheeling and trucking and assures safety under foot. Constructed entirely of steel, it means permanence in flooring.

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RAIL STEEL
REAL STRENGTH

LOUISVILLE approves RAIL STEEL

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These buildings in Memphis are all reinforced with *Rail Steel Bars*

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Following the decisions of Memphis, Buffalo, Detroit, Cincinnatis and the Illinois State Highway Department, Louisville has now made provision for the use of **Rail Steel Reinforcement** in it new building code.

A thorough investigation embracing: examination of prior tests; physical properties and care in manufacture, together with the fact that it is so extensively used, convinced Louisville'sBuilding Code Commission that Rail Steel Reinforcement should rightly be included in their code.

Specify Rail Steel Reinforcement on your next job. It is rolled to meet ASTM specification A-16 and Federal Specification Board specification No. 350.

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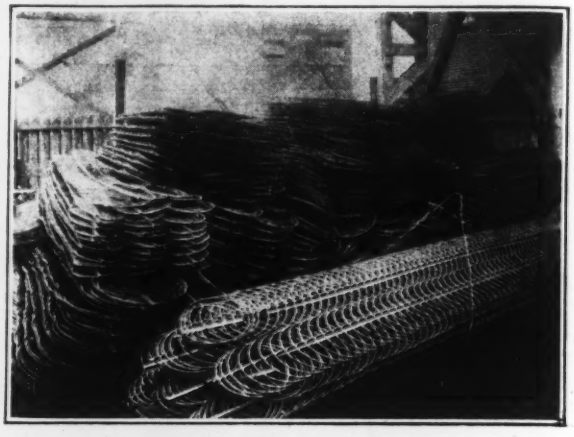
Collapsible SPIRALS

Made in our own shops, by experts. Two angle-spacers used, as a rule, holding the spiral rigidly in the forms. Shipped collapsed, ready to use when set up. Need no straightening. The most effective type of spiral made.



HAVEMEYER BUILDING PRODUCTS include Havemeyer Bars and Spirals, Curb Bars, Inserts, Supporting and Spacing Devices, Metal Lath and Fireproofing Products, also the Havemeyer Truss.

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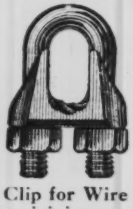

Plain Clip for Wire Rope and lap joining round or distorted bars. Universally used and recommended.

This Mark

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—means that it's made of Marion certified malleable iron, offering great resistance to shock, having high elastic limit, resisting oxidation, wears better, is free from slag holes, shrinkage, cracks, etc., and is not subject to fatigue or crystallization.

Certified malleable castings for every purpose

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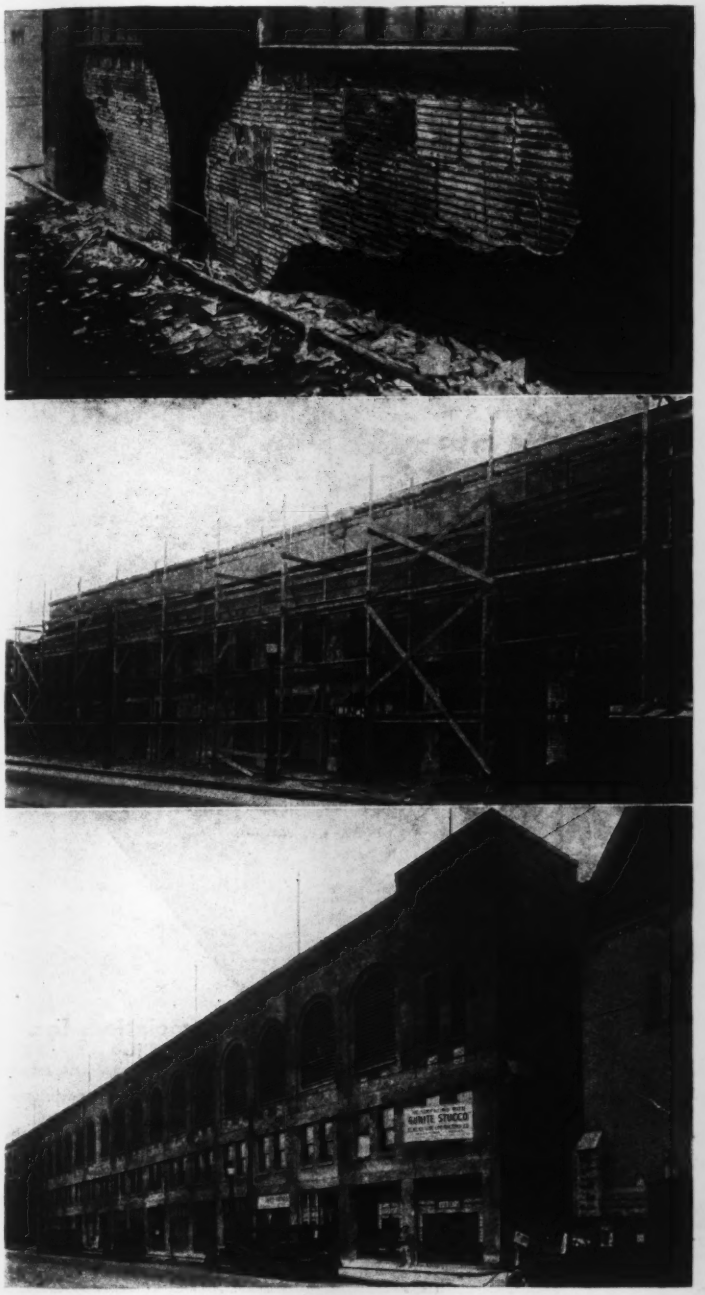
FOR PERMANENCY



"GUNITE" work by our Contract Department

The accompanying photographs show the buildings of the Buffalo International League Ball Park.

Note the condition of the hand placed stucco after a very few years and the lack of adhesion and protection to the hollow tile. This stucco was all removed and

"GUNITE",

reinforced with welded wire fabric, was used to re-surface these buildings with the results as shown.

OVER ANY BASE "GUNITE" ASSURES A PERMANENT, WEATHERPROOF, AND FIRE PROOF STUCCO, AND ONE THAT WILL ALLOW ANY DESIRED ARCHITECTURAL TREATMENT.

LET OUR CONTRACT DEPARTMENT GIVE YOU ESTIMATES ON RE-SURFACING OR ON NEW CONSTRUCTION

As a further illustration of the waterproof qualities of "GUNITE" the specifications on the new Coolidge Dam on the Gila River in Arizona call for "GUNITE" on the upstream face "as an additional precaution to attain the highest practicable degree of impermeability."

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Foreign—International Cement-Gun Co., Zeist, Holland. Cement-Gun Co., Ltd., London, England

"ANTI-HYDRO" Lowers the Freezing Point of Concrete to 15 Degrees F.

You don't have to stop your concrete and masonry work during freezing weather if you use "ANTI-HYDRO." You can keep right on and eliminate loss of time and money and finish on schedule.

All the brick work in this building was laid during freezing weather; results were entirely satisfactory.

"ANTI-HYDRO" is a liquid integral compound which also makes concrete *permanently* hard and waterproof all in one operation. It is easy and economical to use—simply mix it with the gauging water—no skilled labor required.

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The Cylindrical Pile with the big Cast Iron BASE

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KONY TARPS protect your concrete in open storage and in placing these cold winter months.

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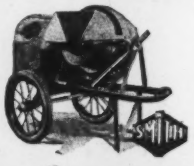

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25 to 45 cu. yds. per day

A low priced tilting mixer of quality. Has Smith Double-Cone Drum—is last word in small mixer efficiency and durability. Light weight; extremely portable—2½ cu. ft. mixed batch capacity. Full details on request.

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Kerosene Concrete Heaters For Winter Work

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Designed and built in Baltimore by dredging experts, working with the cumulative experience of 37 years. *Let us figure on your next job.*

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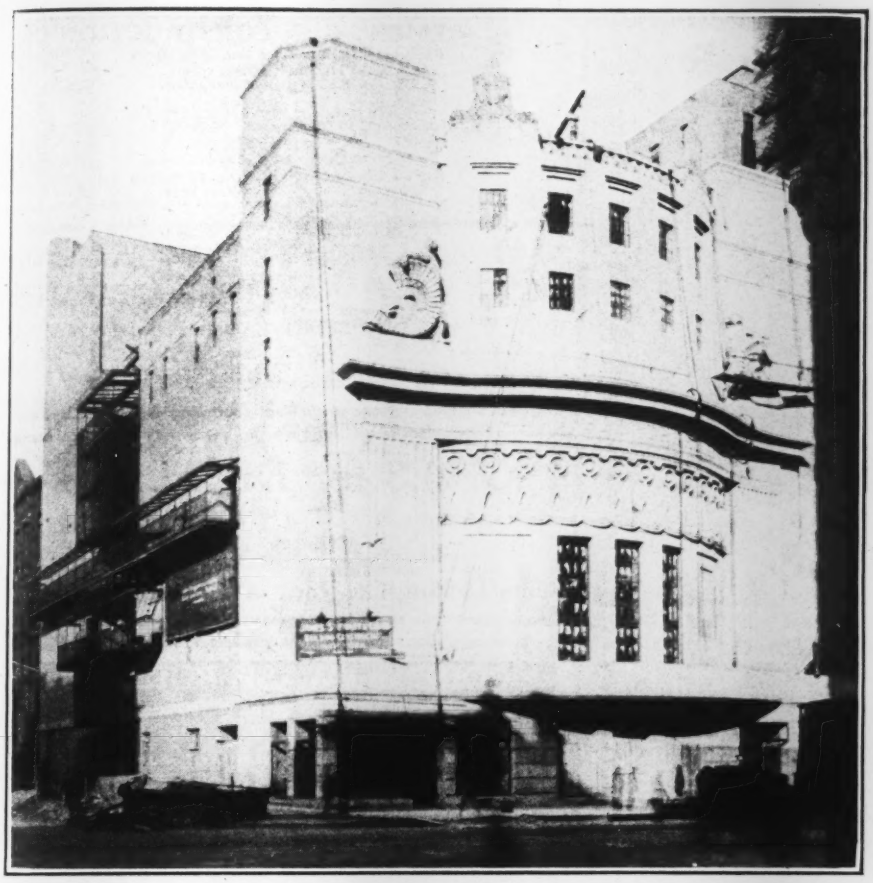

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Ziegfeld Theatre—Thos. W. Lamb, *Archt.* Cast Stone manufactured of Vulcanite Portland Cement by Benedict Stone Corp., 35 West 42nd Street, New York City.

"Why, there is the exterior of the Ziegfeld Theatre nearly finished! Where do you suppose that Limestone came from, it has such an unusually warm appearance."

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Vulcanite Portland Cement is used by all the leading manufacturers of cast stone within shipping distance of the "Vulcanite" plant.

When ordering Cast Stone be sure it is made of Vulcanite Portland Cement.

VULCANITE PORTLAND CEMENT COMPANY

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What Better Combination?

An O & S Mixer and a 15 h.p. Double Drum Gasoline Hoist are a guarantee of speed construction. Here is the combination, on the Walt Whitman Hotel addition job. They are the property of H. L. Stevens, Hotel Architect and Engineer.

The mixer is speedy, flexible and reliable while the sturdy hoist is extremely simple to operate.

"O & S" Mixers are furnished with standard charging chutes, batch hoppers, or pivoted power loaders. The Hoists are built with one, two or three drums and can be furnished with boom swinging attachment. Drives—electric, gasoline, or steam.

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Exclusive Contractors and Engineers
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Ambursen Construction Co., Inc.
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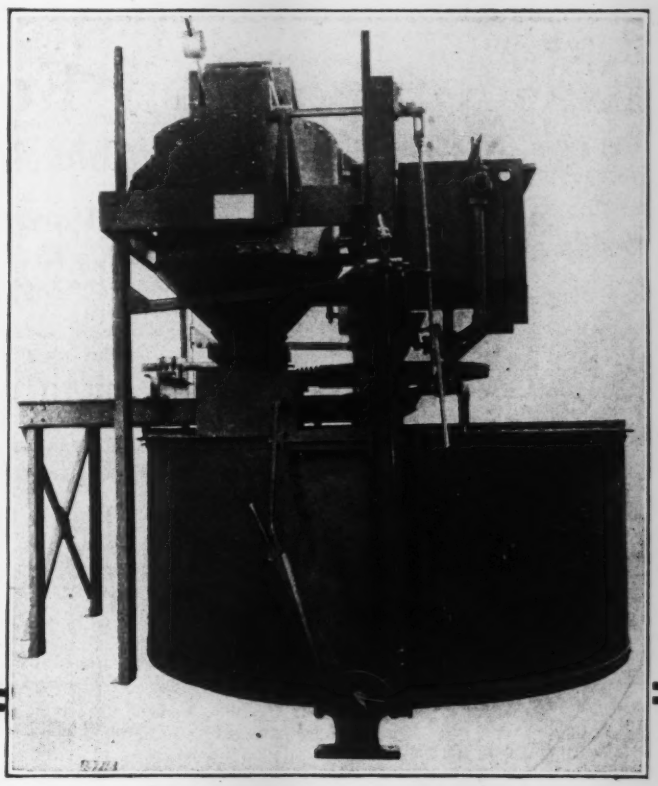
The first machine for hydrating lime in SOUTH AMERICA



—sturdily built though low in cost!

Just as the Vulcan Automatic Hydrator was the first machine to produce hydrated lime in Cuba, this type of Vulcan Hydrator is the first machine for the purpose in South America. It was shipped with a number of Vulcan Lime Kilns to a plant in Argentine Republic, where it is making the first hydrated lime produced in that country.

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It is built for exacting service and to withstand severe treatment for years. In short, it is low in both ultimate and initial cost.

Perhaps you have a problem in hydration, drying, roasting, modulizing, oxidizing, desulphurizing or some other process which requires equipment such as Vulcan makes. If so, you can depend upon Vulcan Engineers to design and build for you the equipment which will do most to cut your operating costs.

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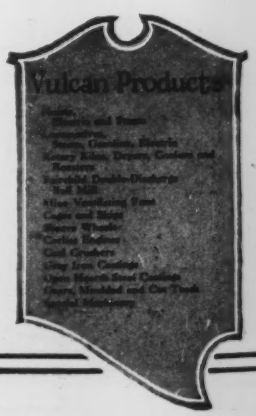
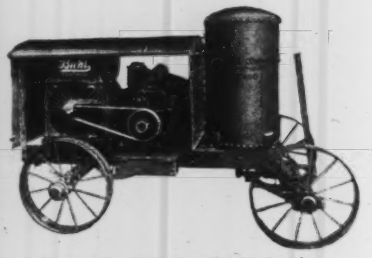


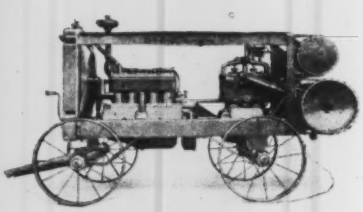
VULCAN of WILKES-BARRE KILNS

Economical Air For Road Work

With BUHL Portable Air Compressors



Type C in 55, 90 and 180 ft. sizes



Type 115 and 160 Y.

Widest Variety of Portable Compressors

The BUHL Company for years has concentrated its efforts on the production of portable air compressors and now offer the user the widest possible choice in sizes and types.

As they are simple in construction and exceptionally rugged, they are particularly well adapted for the arduous duty of road building.

BUHL Type C Portable Compressor

This is a distinctive design, being built with compressor and gasoline engine cast en bloc, providing a machine with low first cost as well as operating costs.

Type C Compressors are built in displacements of 55, 90 and 180 cu. ft. of air per minute.

BUHL Type Y Portable Compressor

This is a two-cylinder vertical compressor with compressor and engine connected by unique coupling and with many distinctive features. Built in displacements of 115 and 160 cu. ft. of air per minute.

Many Other Types

Write for BUHL Bulletins describing other BUHL Compressors. All are provided with steel sides or housing and can be furnished with any mounting desired.

See BUHL Line at *Road Show*, Chicago, Jan. 10 to 14.

THE BUHL COMPANY
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UNION
for fast driving

Union Hammers are demonstrating daily that they are unsurpassed for fast, low cost driving with least damage to the heads.

Union Hammers are built in 9 sizes, from 195 to 28,000 lbs. Steam or air driven.

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Air Tools — Accessories
See our announcement in Jan. 6 issue
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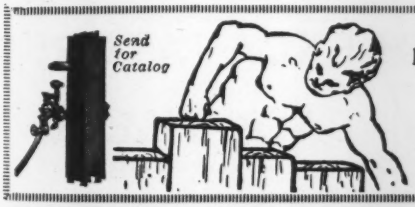

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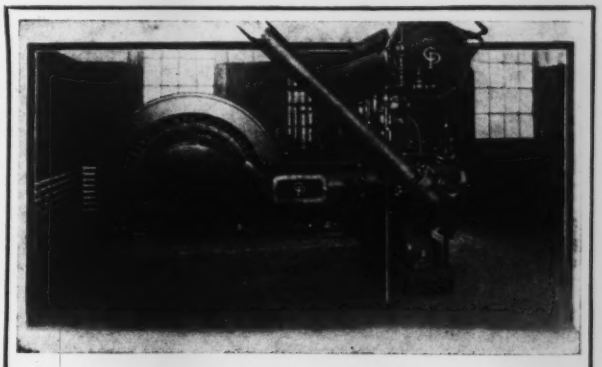
See our Ad in Issue of December 2
The Cleveland Rock Drill Co., 3734 E. 78th St., Cleveland, Ohio



CP Compressors
An Investment in Shop Economy

BACK of the innumerable daily jobs which call for the use of compressed air, stands the compressor, with its ability to increase or decrease production costs.

Hundreds of manufacturers, contractors and railway shops are obtaining the greatest possible shop economy through the use of Chicago Pneumatic Compressors.

With such features as Simplate Valves, automatic regulation and self-lubrication, CP's represent an investment in shop economy and dependable, economical service year after year.

Simplate Valves make these Compressors reliable even in 24-hour-a-day service. With low inertia to overcome, the lift of these discs is straight and uniform, affording a large effective area with small clearance. That is why these machines deliver the maximum volume of air with minimum power consumption.

CP Stationary and Portable Compressors are supplied in steam, oil, belt and direct motor driven types to meet all compressed air requirements. Write for Bulletins containing full information.

C-214½

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Sales and Service Branches all over the World
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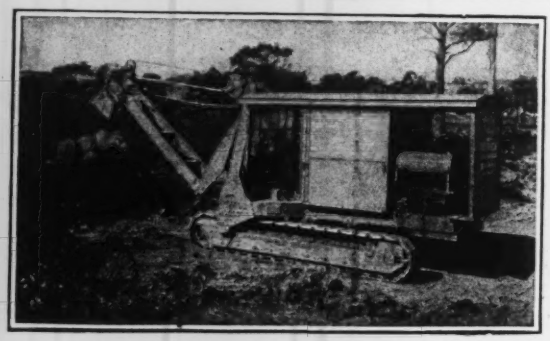

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The picture shows the latest Model 16-B Bay City Skimmer, owned by Thos. Gallo, Irvington, N. J., engaged in new road construction. The moving parts of the crawlers are enclosed on three sides to keep out dirt.

In addition to Skimmer, it will handle Trench Scoop, Dragline or Crane Buckets. The full crawler mounting gives great speed, mobility, traction. Since the cab does not swing, this machine can operate in narrow quarters. All steel construction. Write for details of this great profit-booster.

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Overhead or Gantry
For Every Requirement

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The ease of handling, speedy performance and economy of operation are outstanding features of the
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Little "Turbinair" Hoists Cut Overhead

Use little Sullivan "Turbinair" hoists and cut your interest charges on hoisting equipment. They weigh only 345 lbs., but will lift a ton on single line or pull a 50-ton car.

Sullivan hoists are easy to move, easy to set up, easy to run, and require practically no attention. They are made for air, steam or electric power. Try them for derrick work, draglining, car pulling, or material hoisting.

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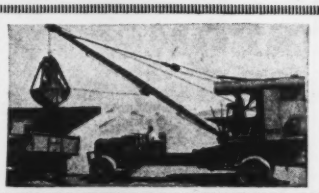

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OHIO *Judge a Crane on Performance*

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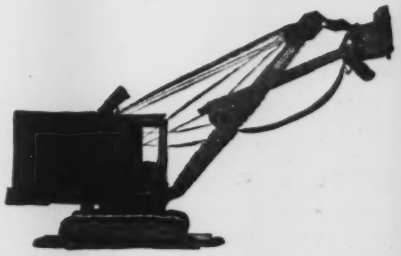

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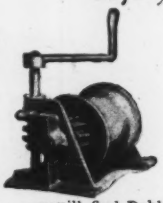

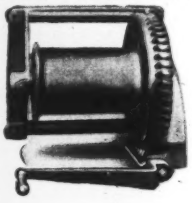

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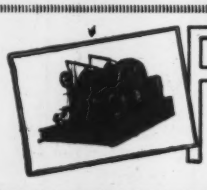

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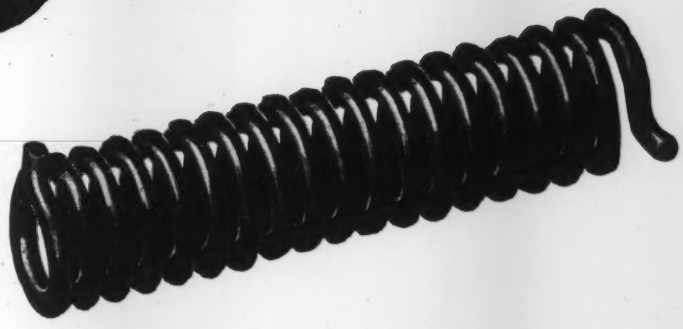

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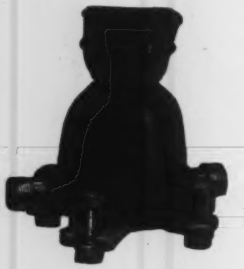

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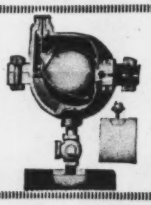

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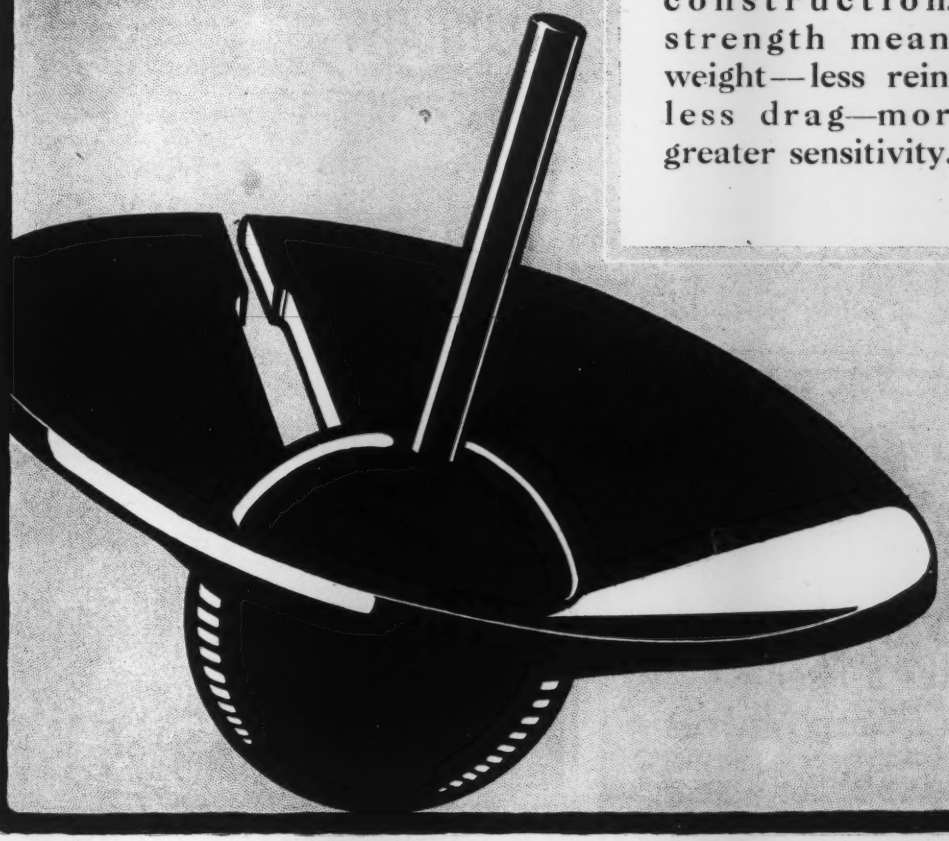

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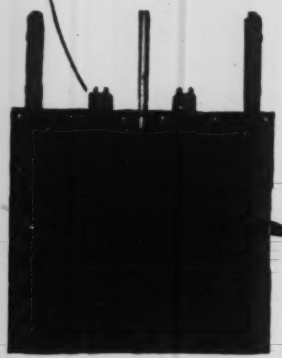

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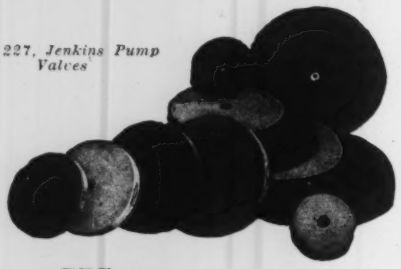
Fig. 227, Jenkins Pump Valves



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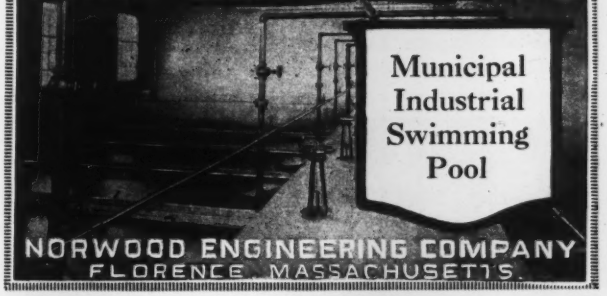

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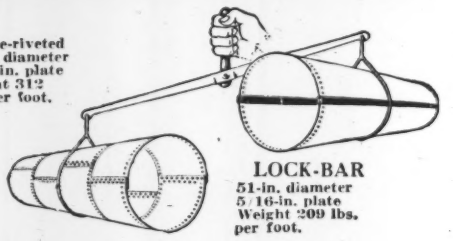

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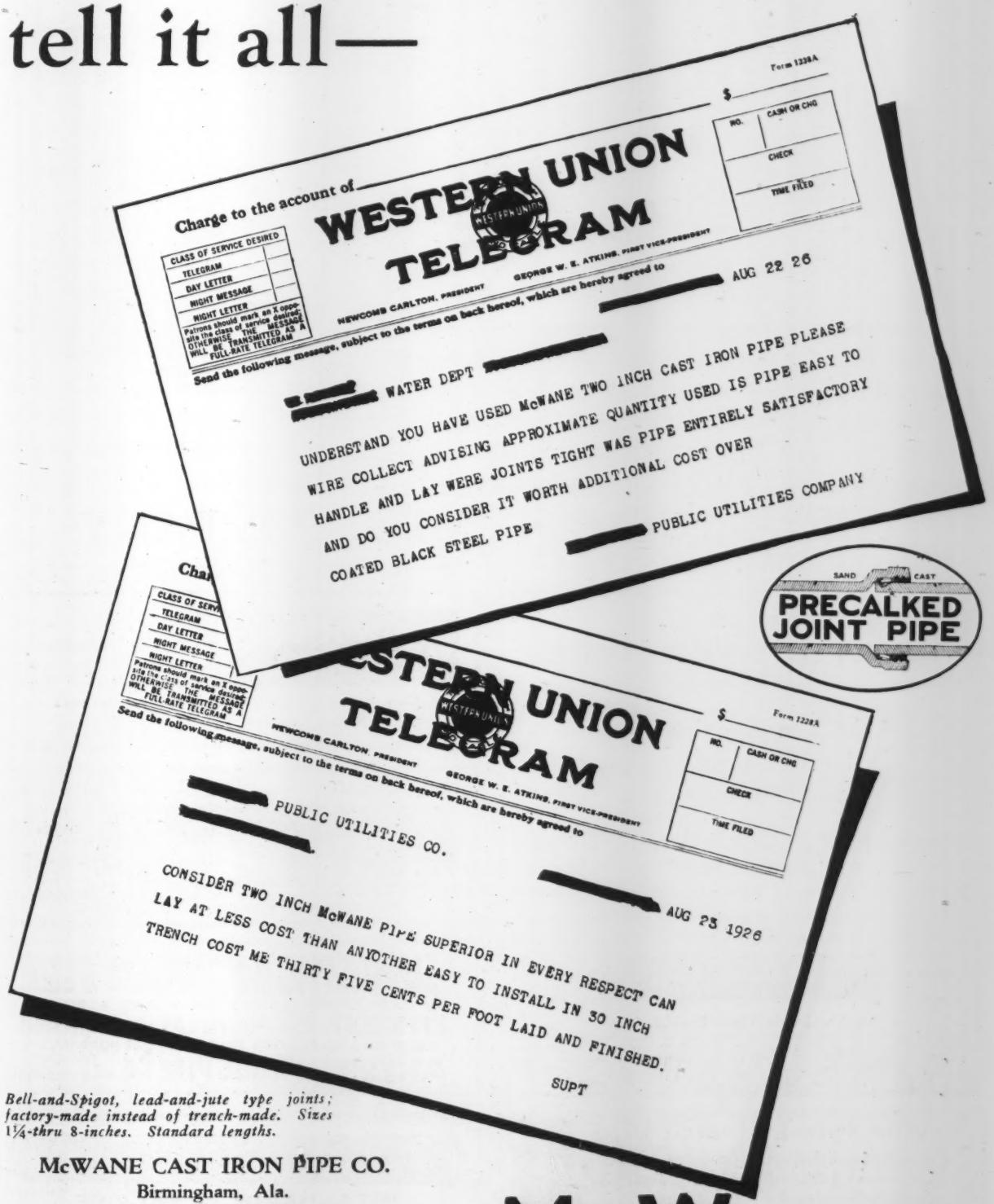
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TRENCH COST ME THIRTY FIVE CENTS PER FOOT LAID AND FINISHED.
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Keeps the line in SERVICE

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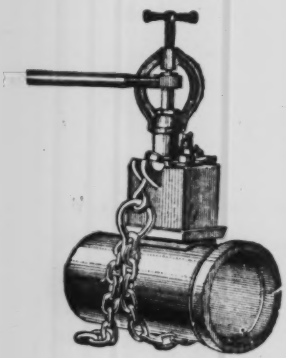

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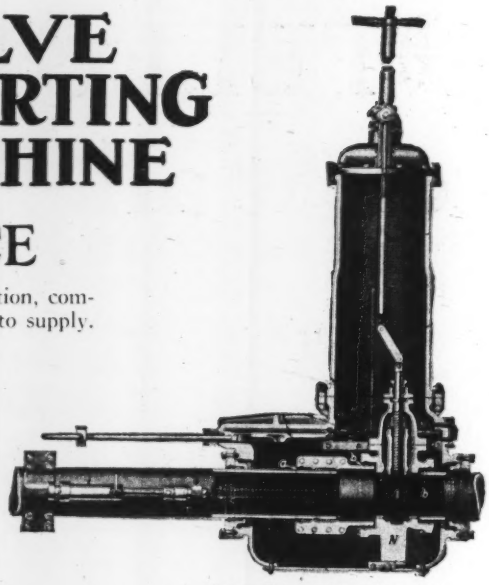

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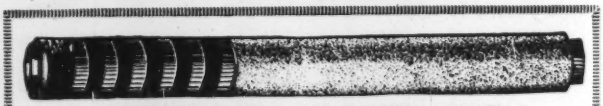

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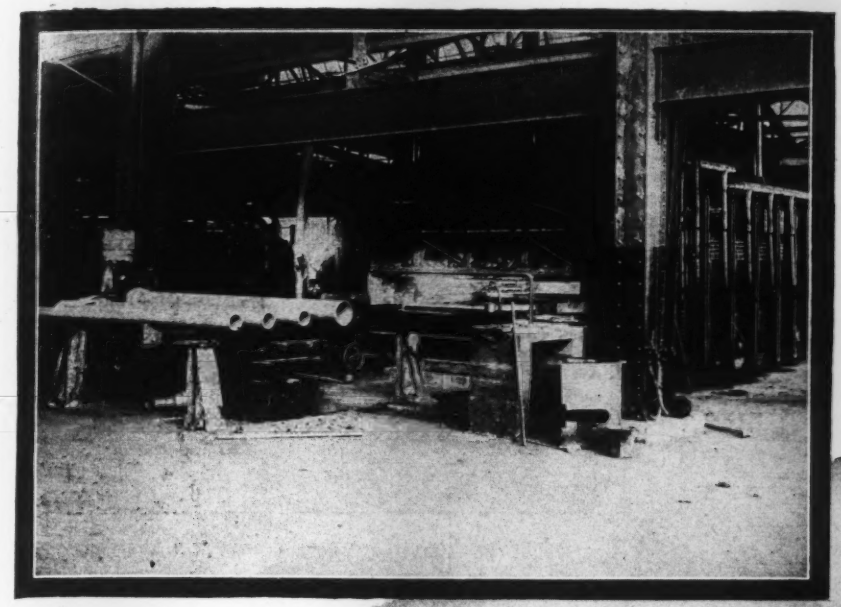

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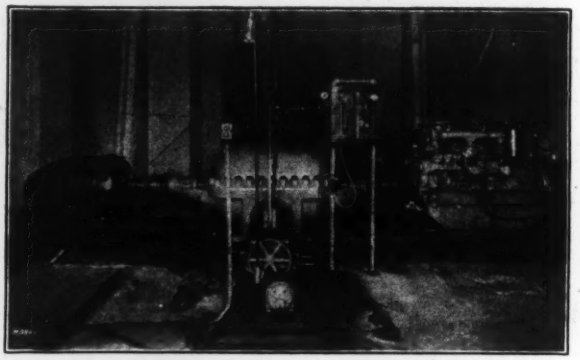

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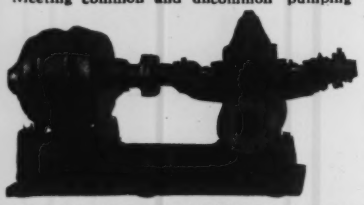

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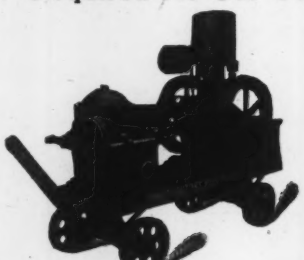

It has an extreme high lift, capable of producing 24-in. vacuum. Being double in action, it gives a continuous flow of water. Its two diaphragms being placed vertically grit cannot lodge and cut them. Working horizontally, it does away with all overhead work. Mounted on solid truck, it is easy to move from place to place. Its compactness reduces needed floor space to only 2x5 ft. Its weight is 1000 lbs. Has no plunger, plunger packing, stuffing boxes or spring valves.

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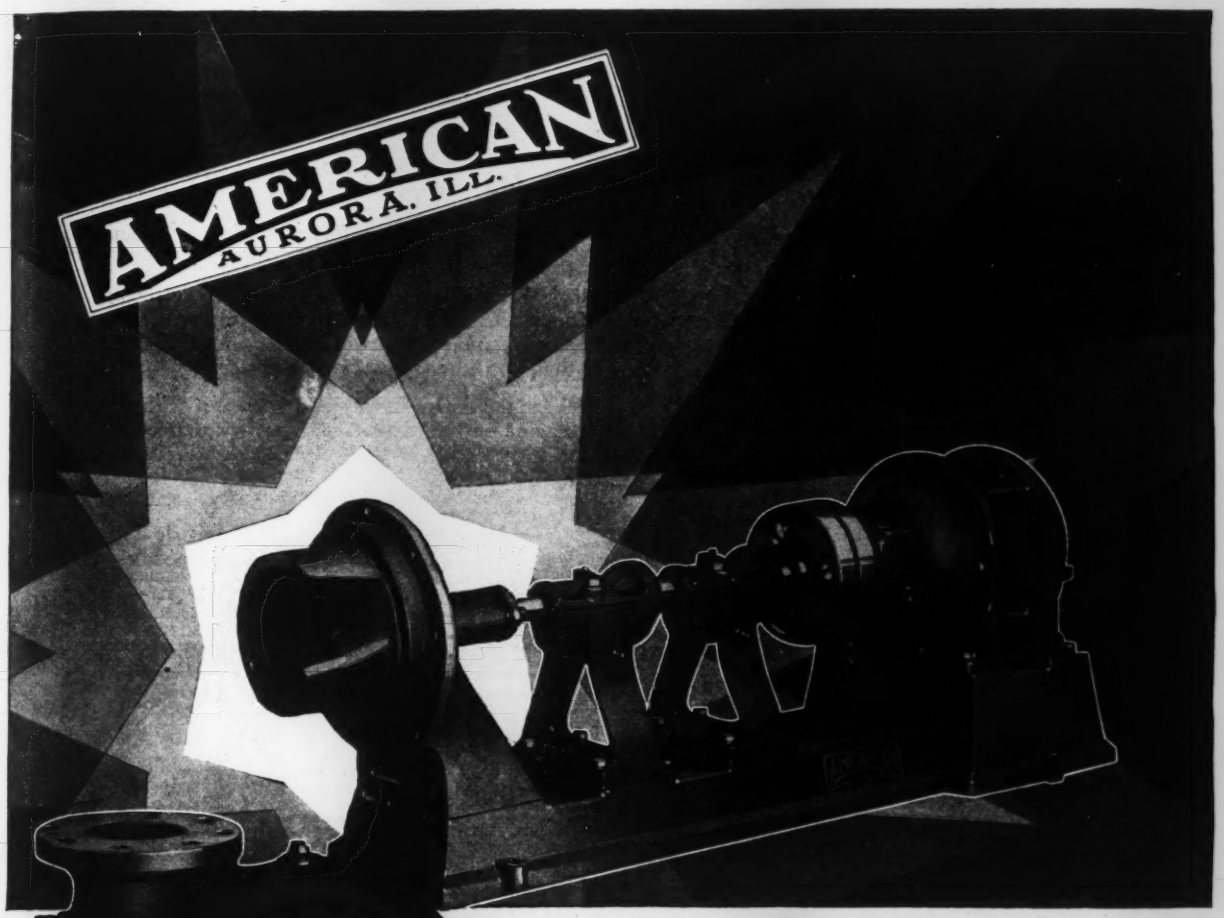

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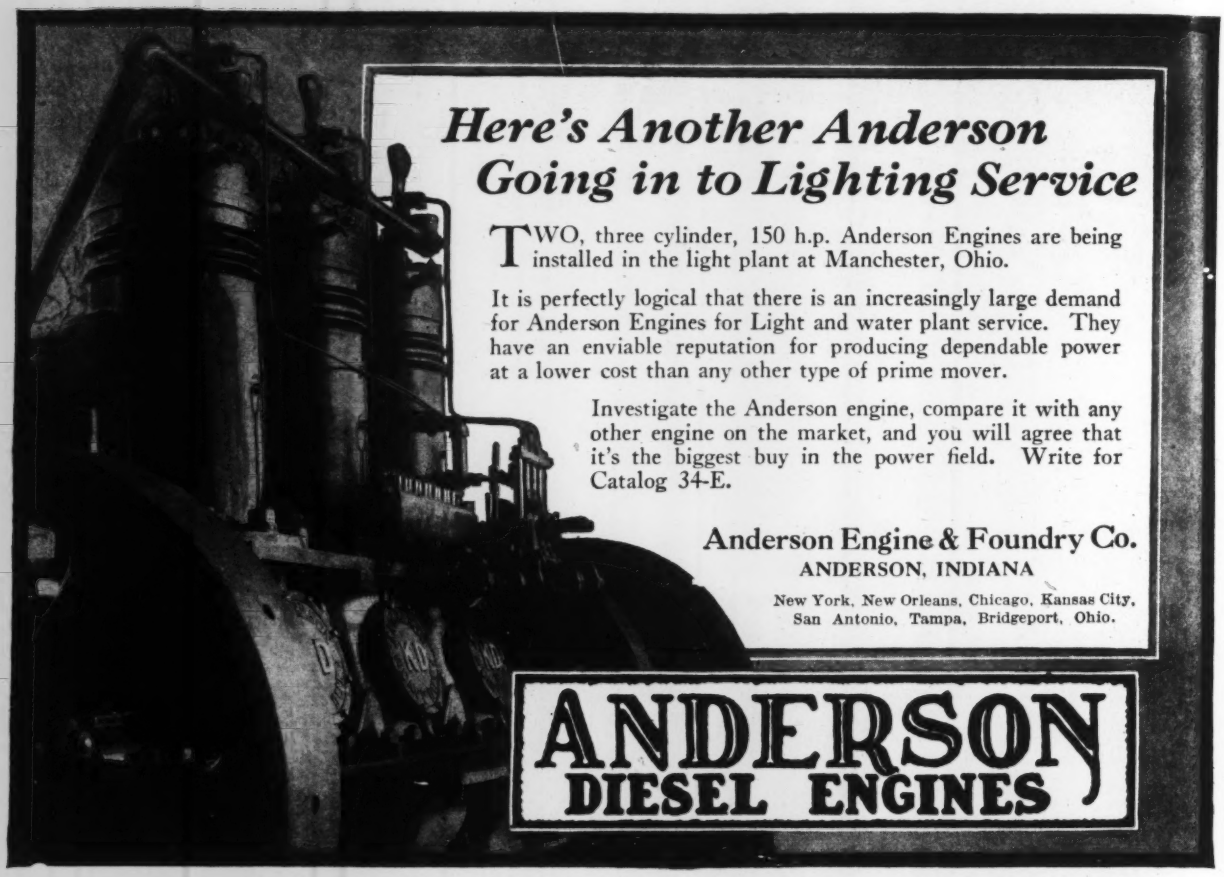

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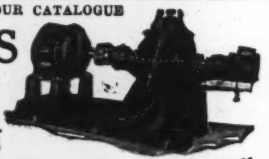

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The economy, flexibility and long life expectancy of the initial Diesel engine-driven unit were so impressive that in 1925 La Porte installed another Worthington unit of the same type.

7676-2

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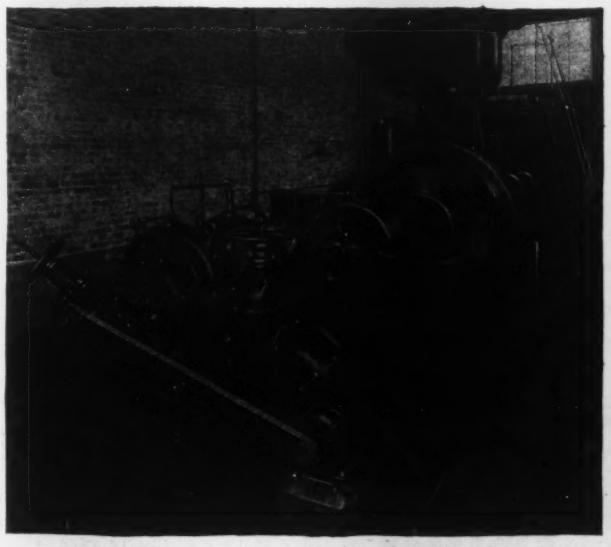

Worthington two-cycle, solid-injection Diesel oil-engine driving a Worthington eight-inch, two-stage centrifugal pump through a step-up gear at La Porte, Indiana. Engine-speed is adjusted to take care of variations in friction head in long pipe line with seasonal variations in demand.

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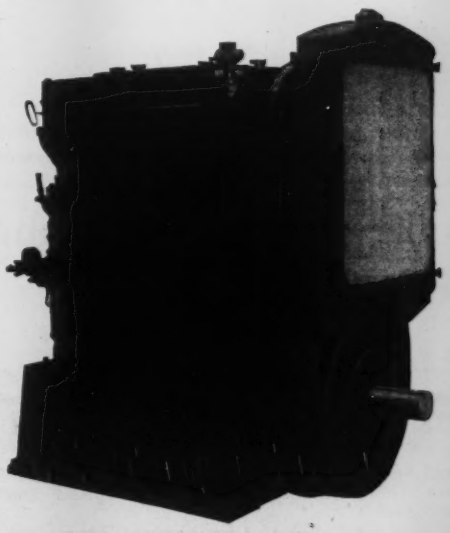

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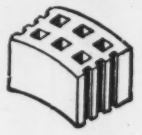

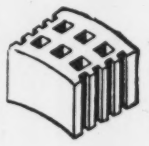

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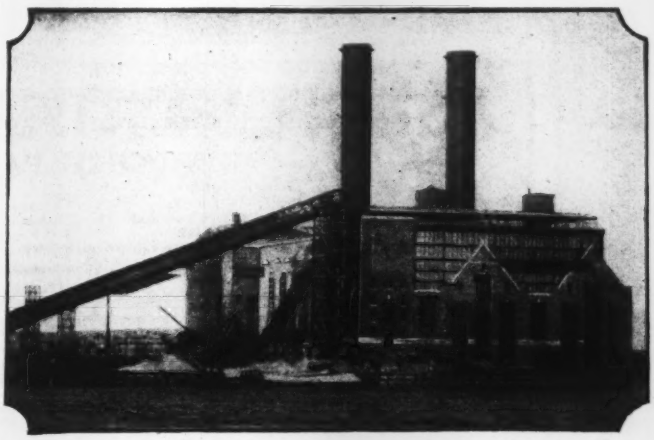

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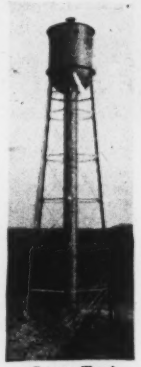

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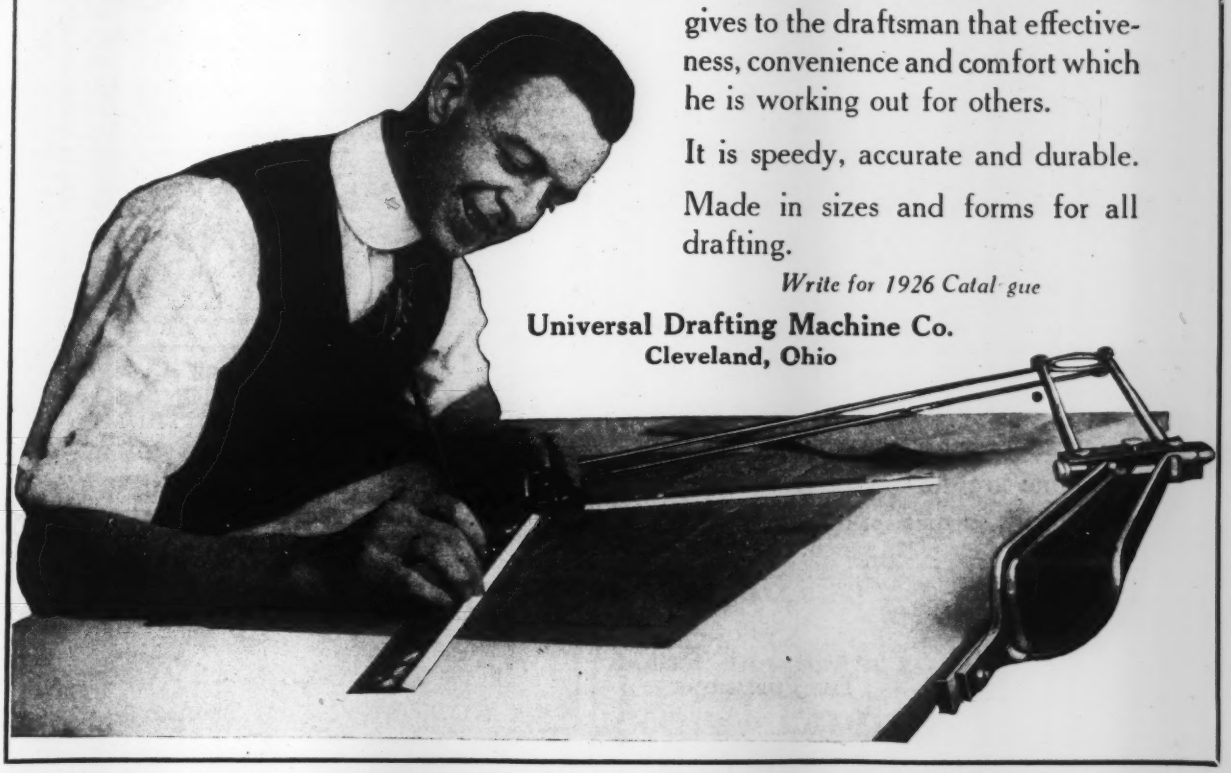

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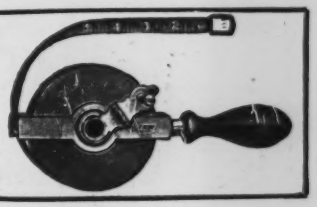

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SEARCHLIGHT SECTION

OFFICIAL PROPOSALS

Copy: Official Proposals reaching our New York Office by 10 A. M., Tuesday can usually be printed in the issue out Thursday.

Rate:
40 Cents a Line an Insertion
Fractional lines count as full lines

Plans and Specifications for inspection by distant bidders may be filed at any of the Engineering News-Record offices without charge.

THESE ARE OFFICIAL NOTICES THAT BIDS ARE WANTED FROM BIDDERS EVERYWHERE

E.N.-R.

OFFICIAL PROPOSALS

Bids: Jan. 10.

Construction of Covered Cut and Bridges

SECTION NO. 3, ROUTE NO. 1
EXTENSION, JERSEY CITY
CONTRACT NO. 5

Trenton, N. J.

Contractors experienced in rock and earth excavation, the construction of bridges, retaining walls, and other structures of steel, masonry or reinforced concrete, with necessary foundations, etc., street paving of concrete, granite block and asphalt and in the other classes and methods of work more particularly described in the Contract, Specifications and Plans, are invited to tender bids on a unit price basis for the construction of Section 3 of the Highway known as Route 1 Extension, said Section being situated between Oakland Avenue and Larch Avenue in the City of Jersey City, a length of about 4,200 feet. There is included in this Contract also certain items for the completion of Section 2 between the Jersey Junction Railroad and Oakland Avenue in the City of Jersey City, also the grading of a roadway between Broadway and Communipaw Avenue, and other work.

The work is to be done under the direction of the State Highway Commission and the State Highway Engineer and in accordance with the provisions of Chapter 14, Laws of 1917, Chapter 253, Laws of 1922, and all Laws amendatory thereof or supplemental thereto.

The work contemplated under this Contract includes briefly the following:

The clearing of the site of the work, including the demolishing of buildings as may be required. The excavation for and the construction of a depressed roadway, including disposal of the material. The construction of various bridges, surface streets, pavements, etc. The relocation and reconstruction of subsurface structures such as sewer, water and gas pipes. Support of the structure carrying street railway tracks, the relocation of poles, wires, etc. The maintenance of traffic on existing streets affected by the work. The building of embankments for roadways, etc., and the grading of a roadway between Broadway and Communipaw Avenue, a distance of approximately 6,000 lineal feet, and other work shown more particularly on the plans.

Attention is called to certain special conditions affecting the work set forth in Article 2 of the Information for Bidders and especially to the relation of the proposed work to the tracks of the Erie Railroad, and other adjacent properties, the Contractor's responsibility for protecting these from the effects of blasting and other damages, incident to the construction, and the special provision of the Contract relative thereto.

The principal items of work to be done and the approximate quantities of some of them are:

Excavation, earth and rock, 172,000 cu.yds.
Concrete (except for pavement), 29,000 cu.yds.
Structural and other Steel, 5,200 tons.
Asphalt Paving, 18,300 sq.yds.
Granite Block Paving, 29,600 sq.yds.

The plans, specifications, form of proposal, contract and bond are on file at the office of the State Highway Commission of New Jersey, at Trenton, N. J. Copies can be obtained at the office of the Engineer at 921 Bergen Avenue, Jersey City. A deposit of Fifty Dollars ($50.00) will be required by the State Highway Commission of New Jersey for each set of Plans and Specifications furnished. The whole amount of such deposit will be refunded on the return of the Plans and Specifications in good condition to the Engineer at 921 Bergen Avenue, Jersey City, N. J., on or before January 17th, 1927.

Bids for this work will be received at the office of the State Highway Commission, 9th floor, Broad Street Bank Building, Trenton, New Jersey, on January 10th, 1927, at 12:00 o'clock noon, and will be opened and read immediately thereafter.

Bids must be made on the form of Proposal which will be furnished by the Department, and must be enclosed in a sealed special addressed envelope, which will also be furnished, bearing the name and address of the bidder and plainly marked "Proposal for the Construction of Section No. 3, Route No. 1 Extension," and a certified check made payable to the order of the Treasurer of the State of New Jersey, for the sum of One Hundred Thousand Dollars ($100,000.00) must accompany each bid. The certified checks accompanying the proposals will be returned immediately after bids have been opened, except those of the lowest two regular bidders. The checks of these two bidders will be returned when the necessary contract bond has been furnished and the contract properly executed by the bidder to whom award has been made. If the accepted bidder fails to execute and deliver the contract and bond within the time specified, the check deposited by him shall become the absolute property of the State of New Jersey.

Each bidder must accompany his bid with a certificate from a surety company or surety companies duly authorized to do business in the State of New Jersey and satisfactory to the State Highway Commission of New Jersey, stating that if the bidder is awarded the contract such surety company or companies will provide the bidder with a guaranty bond or bonds for a sum equal to the total amount of the bid.

The State Highway Commission of New Jersey reserves the right to reject any or all bids.

By order of the State Highway Commission.

A. LEE GROVER,
Secretary.

Bids Jan. 7.

Concrete Highways

Harrisburg, Pa.

Pennsylvania Department of Highways, Harrisburg, Pennsylvania. Bids will be received January 7, 1927, for construction of one project, totaling 45,477 feet, construction to be reinforced concrete. Project situated in McKean County. Full particulars upon application to W. H. Connell, Engineering Executive and Deputy Secretary of Highways, Harrisburg, Pennsylvania.

Bids: Jan. 7.

Wooden Water Tank

Conneaut Lake, Crawford Co., Pa.

Sealed proposals or bids for furnishings and erecting a 20,000 gallon wooden water tank, with all appurtenances thereto and control apparatus connecting the same with the Borough pump station will be received by the Borough Council of the Borough of Conneaut Lake, Crawford County, Pennsylvania, up to eight o'clock p.m. on the seventh day of January, 1927. Bids must be on the blank forms furnished by the borough and accompanied by a certified check for 5% of the amount of the bid. Specifications for the proposed work may be seen at the office of Geo. C. Cobler, Borough Secretary, Conneaut Lake, Pa., or at the office of Hill and Hill, Civil Engineers, Marine Bank Bldg., Erie, Pa.

OFFICIAL PROPOSALS

Bids: Jan. 11.

Highway Tunnel

Chattanooga, Tennessee.

Sealed bids will be received until 1:00 P. M., January 11, 1927, and publicly opened by the Highway Commissioners of Hamilton County, Tennessee, at the office of the Tunnel Engineers in the Court House in Chattanooga, Tennessee; for furnishing all labor, tools, machinery, equipment, and materials necessary and required in the construction of a highway tunnel or twin tunnels through Missionary Ridge and the approaches thereto. All information may be obtained from, and bids addressed to, A. M. Nelson, Tunnel Engineer, Court House, Chattanooga, Tennessee marked "Tunnel Bids." Plans and specifications may be examined at his office.

No bids will be considered except from experienced tunnel builders with adequate equipment.

Cash in banks to pay engineers estimates monthly as work progresses.

The Highway Commissioners reserve the right to reject any and all bids.

Certified check for the sum of One Thousand ($1,000.00) Dollars must accompany each bid as evidence of good faith and as a guarantee that if awarded contract, the bidder will execute contract and give bond as required, to be forfeited in event the bidder fails to do so.

Hamilton County Highway Commission.
T. S. WILCOX, Chairman.
J. M. PAYNE.
ALVIN ROBERTSON.

Bids: Jan. 20.

Sewage Disposal Works

Blacksburg, Va.

Sealed proposals for the construction of Sewage Disposal Works for the Virginia Polytechnic Institute and the Town of Blacksburg, Virginia, will be received at the office of the President, Virginia Polytechnic Institute, Blacksburg, Virginia, until noon on January 20, 1927, at which time they will be publicly opened and read.

Plans and specifications may be secured on or after January 3, 1927, from the office of the Consulting Engineer, S. B. Williamson, 704 National Bank Building, Charlottesville, Virginia, upon deposit of Fifteen ($15) Dollars. The Plans and Specifications are on file at the above office and at the Administration Building, V. P. I., Blacksburg, Va. Bids are required to be made out on the form provided and must be accompanied by a certified check for Ten Thousand ($10,000) Dollars. Bond in the amount of Fifty Thousand ($50,000) Dollars is required.

The work consists of furnishing all labor and material required for the construction of an Imhoff tank, contact beds, final settling tank and sludge beds, with appurtenances, involving principally the following approximate quantities:

Earth Excavation	6,000 cu.yds.
Rock Excavation	1,500 cu.yds.
Reinforced Concrete	1,675 cu.yds.
Crushed stone	6,500 cu.yds.

The Engineer will be at the site of the work on January 12 and 19 for the convenience of prospective bidders.

The Virginia Polytechnic Institute and the Town of Blacksburg reserve the right to reject any or all bids and to consider the qualifications of the bidder in awarding the contract.

JULIAN A. BURRUSS, President,
Virginia Polytechnic Institute.
F. E. EHEART,
Chairman Sewer Committee,
Blacksburg, Virginia.

OFFICIAL PROPOSALS

Bids: Jan. 13.

Sewer Construction

Paducah, Ky.

Sealed bids will be received by the Board of Public Works of Paducah, Kentucky, at their office at the City Hall up to ten o'clock A.M., January 13, 1927, for furnishing all tools, labor and materials and constructing a system of combined sewers in Zones 6 and 7 of Sewer District No. 3, and storm sewers in Zone 8 of Sewer District No. 3, and storm sewers in Zones A and B of Sewer District No. 1, for the City of Paducah, Kentucky, in accordance with plans, profiles and specifications on file in the office of the Secretary of the Board and the office of the City Clerk.

When filed with the Board of Public Works, bids must be accompanied by a Cashier's check on any bank, in the following amounts:

Zone 6	$1,500.00
Zone 7	1,000.00
Zone 8	1,500.00
Zone A	1,000.00
Zone B	2,000.00

The checks shall be made payable to the City Treasurer of the City of Paducah, Kentucky. Checks of unsuccessful bidders will be returned when their bids are rejected.

The following is an approximate list of the amounts of the major items to be bid upon:

Zone No. 6:
10,721 lin.ft. 6" sewer pipe in house connections.
260 lin.ft. 8" sewer pipe in house connections.
2,790 lin.ft. 10" sewer pipe in house connections.
1,790 lin.ft. 12" sewer pipe in house connections.
2,350 lin.ft. 15" sewer pipe in house connections.
2,516 lin.ft. 18" sewer pipe in house connections.
1,478 lin.ft. 21" sewer pipe in house connections.
1,063 lin.ft. 24" sewer pipe in house connections.
350 lin.ft. 30" sewer pipe in house connections.
31 manholes.
65 inlets, Type "A"
25 inlets, Type "B"
Maximum depth of trench is 14 ft.

Zone No. 7:
6,906 lin.ft. 6" sewer pipe in house connections.
910 lin.ft. 10" sewer pipe in house connections.
180 lin.ft. 12" sewer pipe in house connections.
440 lin.ft. 15" sewer pipe in house connections.
360 lin.ft. 18" sewer pipe in house connections.
910 lin.ft. 21" sewer pipe in house connections.
2,095 lin.ft. 24" sewer pipe in house connections.
1,297 lin.ft. 27" sewer pipe in house connections.
14 manholes.
41 inlets, Type "A"
9 inlets, Type "B"
Maximum depth of trench is 16 feet.

Zone No. 8:
1,540 lin.ft. 10" sewer pipe.
2,295 lin.ft. 12" sewer pipe.
3,604 lin.ft. 15" sewer pipe.
745 lin.ft. 18" sewer pipe.
1,672 lin.ft. 21" sewer pipe.
1,256 lin.ft. 27" sewer pipe.
21 manholes.
1 drop manhole.
74 inlets, Type "A"
44 inlets, Type "B"
Maximum depth of trench is 15 feet.

Zone A:
11,136 lin.ft. 6" sewer pipe for house connections.
2,514 lin.ft. 10" sewer pipe.
1,387 lin.ft. 12" sewer pipe.
1,221 lin.ft. 15" sewer pipe.
1,220 lin.ft. 18" sewer pipe.
1,221 lin.ft. 21" sewer pipe.
1,234 lin.ft. 24" sewer pipe.
2,020 lin.ft. 27" sewer pipe.
570 lin.ft. 30" sewer pipe.
28 manholes.
51 inlets, Type "A"
23 inlets, Type "B"
1 junction structure.
1 outfall structure.
Maximum depth of trench is 18 feet.

Zone B:
19,319 lin.ft. 6" sewer pipe in house connections.
4,714 lin.ft. 10" sewer pipe in house connections.
2,290 lin.ft. 12" sewer pipe in house connections.
1,195 lin.ft. 15" sewer pipe in house connections.
1,618 lin.ft. 18" sewer pipe in house connections.
1,997 lin.ft. 21" sewer pipe in house connections.
2,508 lin.ft. 24" sewer pipe in house connections.
3,680 lin.ft. 27" sewer pipe in house connections.
809 lin.ft. 30" sewer pipe in house connections.
442 lin.ft. 48" sewer pipe in house connections.
1,031 lin.ft. 54" sewer pipe in house connections.
37 manholes.
129 inlets, Type "A"
45 inlets, Type "B"
3junction structures.
1 outfall structure.

The printed forms on which all bids must be made may be obtained from the City Engineer's office at Paducah, or the Engineers, Black & Veatch. Plans may be examined at the office of Black & Veatch, 701 Mutual Building, Kansas City, Missouri, and at 811 City National Bank Building, Paduca, Kentucky. Bidders may obtain from the Engineers or the City Engineer sets of plans for their own use by making a deposit of twenty-five dollars ($25.00); eighteen dollars ($18.00) of the amount will be refunded on the return of the plans in good condition within ten (10) days from the day on which bids are received; seven dollars ($7.00) being retained to cover the cost of printing.

BOARD OF PUBLIC WORKS
CITY OF PADUCAH, KENTUCKY
By E. R. BRADSHAW,
City Engineer.

BLACH & VEATCH,
Consulting and Supervising Engineers,
Kansas City, Missouri
and Paducah, Kentucky.

Bids: Jan. 19.

Electric Elevators

SPEC. NO. 4720

Brooklyn, N. Y.

Sealed proposals for Electric Elevators, Creedmoor Division, Brooklyn State Hospital, Queens (Borough of Queens), New York City, will be received by the Department of Mental Hygiene, Capitol, Albany, N. Y., until 3 o'clock p.m., Wednesday, January 19th, 1927, when they will be publicly opened and read. Proposals shall be enclosed in an envelope furnished by the State Architect, sealed and addressed, and shall be accompanied by a deposit as a guarantee that bidder will enter into contract if awarded same. Deposit shall consist of a certified check drawn upon some legally incorporated bank in the State of New York and made payable to the State of New York or money equal to five per cent (5%) of the amount of proposal. The contractor to whom the award is made will be required to furnish surety company bond in the sum of fifty per cent (50%) of the amount of contract within thirty days after official notice of award of contract and in accordance with the terms of Specification No. 4720. The right is reserved to reject any or all bids. Drawings and specifications may be examined at the Creedmoor Division, Brooklyn State Hospital, Queens (Borough of Queens), New York City, at the New York Office of the State Architect, 18th floor, Flatiron Building, 949 Broadway, New York City, and at the Office of the State Architect, Capitol, Albany, N. Y. Drawings, specifications and blank forms of proposal may be obtained by persons or firms engaged in the line of work required at the discretion of the Architect from the Office of the State Architect, Capitol, Albany, N. Y.

Dated: December 10th, 1926.

Bids: Jan. 5.

Bridge Substructure

Fayetteville, W. Va.

Sealed proposals will be received by the County Court of Fayette County, West Virginia, at the Court House in Fayetteville until 10 o'clock A.M. on the 5th day of January, 1927, and opened and read immediately thereafter for the construction of Substructure for Bridge over New River at Stone Cliff, West Virginia.

The approximate quantities are as follows:
2,600 Cubic Yards of Plain and Reinforced concrete.
2,830 Cubic Yards of Dry, Wet and Rock Excavation.
85,530 Lb. Reinforcing Steel.

Proposals will be received only upon standard forms, in accordance with plans, specifications and estimates of quantities therefor, which standard forms, plans, specifications and estimates of quantities may be obtained from the County Road Engineer at Fayetteville, West Virginia.

Each proposal must be accompanied by a certified check in the amount of $4,000.00.

The right is reserved to reject any and all proposals.

THE COUNTY COURT OF FAYETTE COUNTY, W. VA.
By THOMAS BOONE, Clerk.

Bids: Jan. 11.

Deep Well Pump

Tallahassee, Fla.

Bids will be received by the City Auditor and Clerk of the City of Tallahassee, Florida, until twelve o'clock noon, January 11th, 1927 for Deep Well Pump.

SPECIFICATIONS:

Maximum capacity of pump to be 1,200 G.P.M. against a total of 290 ft. head consisting of 100 ft. lift to the surface; discharge 190 feet above the surface directly connected to a General Electric slip ring motor, three phase, 60 cycle, 2300 volt; with starter, having under voltage and overload protection with starting resistance. Drop pipe to fit in twelve inch O. D. well casing, and to extend 120 feet below pump head base.

State in bid date of delivery; method of oiling the shaft, and manufacturers guarantee.

The City reserves the right to reject any and all bids and to award the contract as it may deem the best interest of the City.

WM. R. GALT,
City Manager.

ATTEST:
B. H. BRIDGES,
City Auditor and Clerk.

Bids: Jan. 7.

Drain Construction

Pontiac, Mich.

Sealed proposals will be received at the office of the City Clerk, City Hall, Pontiac, Michigan, until one o'clock p.m. (Eastern Standard Time), of Friday, January 7, 1927, at which time the bids will be publicly opened and read by the clerk and the rates of bids for the different items noted, for the construction of Section 1 of the East Side Drain.

The quantities involved in this work consist principally of the following:
1,412 lin.ft. 8 ft. diameter sewer.
542 lin.ft. 7 ft. diameter sewer.
4 lin.ft. 42" diameter sewer.
5 Standard Manholes.
38 lin.ft. 15" sewer.
1 Head Wall.

The plans and specifications for the work may be examined at the office of the City Engineer, Pontiac, Michigan, or copies may be obtained by making a deposit of Ten Dollars which will be refunded upon their return in good condition.

A certified check for a sum not less than 5% of the amount of the proposal will be required with each proposal as a guarantee of good faith and the same to be subject to the conditions stipulated in the instructions to bidders.

The right to accept any proposal, to reject any or all proposals, and to waive defects in proposals is reserved by the City.

By order of the Commission.
H. A. MAURER,
City Clerk.

JAMES R. POLLOCK,
City Engineer.

OFFICIAL PROPOSALS

Bids: Jan. 19.

Electric Elevator

SPEC. NO. 4721

Kings Park, N. Y.

Sealed proposals for Electric Elevator, Kings Park State Hospital, Kings Park, N. Y., will be received by the Department of Mental Hygiene, Capitol, Albany, N. Y., until 3 o'clock, P.M., Wednesday, January 19th, 1927, when they will be publicly opened and read. Proposals shall be enclosed in an envelope furnished by the State Architect, sealed and addressed, and shall be accompanied by a deposit as a guarantee that bidder will enter into contract if awarded same. Deposit shall consist of a certified check drawn upon some legally incorporated bank in the State of New York and made payable to the State of New York or money equal to five per cent (5%) of the amount of proposal. The contractor to whom the award is made will be required to furnish surety company bond in the sum of fifty per cent (50%) of the amount of contract within thirty days after official notice of award of contract and in accordance with the terms of Specification No. 4721. The right is reserved to reject any or all bids. Drawings and specifications may be examined at the Kings Park State Hospital, Kings Park, N. Y., at the New York Office of the State Architect, 18th floor, Flatiron Building, 949 Broadway, New York City, and at the office of the State Architect, Capitol, Albany, N. Y. Drawings, specifications and blank forms of proposal may be obtained by persons or firms engaged in the line of work required at the discretion of the Architect from the Office of the State Architect, Capitol, Albany, N. Y.
Dated: Dec. 15th, 1926.

U. S. Government

Sealed proposals for constructing Scout Cruisers Nos. 26, 27 and 28, and also separate proposals for furnishing main turbines and gears for said vessels, will be received at the Navy Department until 12 o'clock noon March 10, 1927, when they will be publicly opened. Circulars for the information of bidders and plans and specifications relating to said vessels and their machinery are ready for distribution among prospective bidders. Forms of proposal and contract may be had on application to the Navy Department. CURTIS D. WILBUR, Secretary of the Navy, December 21, 1926.

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U. S. Government

DEPARTMENT OF THE INTERIOR, BUREAU OF RECLAMATION, Klamath Falls, Oregon, November 24, 1926. Pursuant to Act of Congress approved February 2, 1911 (36 Stat., 895), the United States will offer for sale at public auction, to the highest bidder, at 2 o'clock P. M., January 18, 1927, at the office of the Bureau of Reclamation, Klamath Falls, Oregon, a tract of land in Klamath County, Oregon, containing an area of approximately 87 acres, more particularly described as follows, to wit: A strip of land four hundred (400) feet wide on the left bank of the Klamath River, in the northwest quarter of the southeast quarter, and in Lots eight (8), nine (9), ten (10), eleven (11), twelve (12), and thirteen (13) of section 36, township thirty nine (39) south, Range seven (7) East, Willamette Meridian, the southerly and easterly boundary of which is described as follows: Beginning at a point in the east line of section 36, T. 39 S., R. 7 E., W.M., distant 1337.3 feet from the southeast corner of said section 36, and designated as Station 0.0 of this survey, thence N. 57° 30' W. 263 ft. to Sta. 2—63; thence curving 10° right on a 10° curve 100 feet to Sta. 3—63; thence N. 47° 30' 483.5 ft. to Sta. 8—46.5; thence curving 9° right on a 9° curve 100 ft. to Sta. 9—46.5; thence N 38° 30' W. 637.3 ft .to Sta. 15—83.8; thence curving 10° left on a 10° curve 100 ft. to Sta. 16—83.8; thence N 48° 30' W. 522 ft. to Sta. 22—05.8; thence curving 33° left on a 10° curve 330 ft. to Sta. 25—35.8; thence N 81° 30' W 237.95 ft. to Sta. 27—73.75; thence curving 30° right on a 10° curve 300 ft. to Sta. 30—73.75; thence N 51° 30' W 665.95 ft. to Sta. 37—39.7; thence curving 10° left on a 10° curve 100 ft. to Sta. 38—39.7; thence N 61° 30' W. 79.1 ft. to Sta. 39—15.8; thence curving 34° left on a 10° curve 340 ft. to Sta. 42—58.8; thence S. 84° 30' W. 39.42 ft. to Sta. 42—98.22; thence curving left 91° on a 25° curve 364 ft. to Sta. 46—66.22; thence S. 6° 30' E. 614 ft. to Sta. 52—81.2; thence curving left 2° 30' on a 10° curve 25 ft. to Sta. 53—06.2; thence S. 9° E. 1626 ft. to Sta. 69—32.9; thence curving right 70° on a 10° curve 700 ft. to Sta. 76—32.9; thence S. 62° W. 1377.05 ft., more or less, to the south line of section 36, intersecting the said south line of Sec. 36, at a point distant about 540 ft. from the southwest corner of Section 36. Deed for the above described land will include a perpetual right of ingress and egress, 60 feet in width along the eastern boundary of said Section Thirty-six (36), and extending from the south line of said section to the land above described. No bid will be accepted for less than the appraised value and the right is reserved to reject any or all bids. For detailed information, address the Bureau of Reclamation, Klamath Falls, Oregon. The successful bidder will be required to enter into a contract with the United States for the purchase of the property above described. Each bidder must accompany his bid with an unconditional certified check for the sum of $500, made payable to the Special Fiscal Agent, Bureau of Reclamation. If the bidder whose bid is accepted refuses to complete the purchase in accordance with his bid, the proceeds of said check shall become subject to deposit in the Treasury of the United States, as moneys belonging to the United States. H. D. Newell, Superintendent, Bureau of Reclamation.

U. S. Government

UNITED STATES ENGINEER OFFICE, Room 710 Army Building, 39 Whitehall Street, New York, N. Y. Sealed proposals will be received here until 12 M., January 20, 1927, and then opened, for dredging and rock removal in East River, N. Y. Further information on application.

U. S. ENGINEER OFFICE, MOBILE, ALA.—Sealed proposals will be received here until 11:00 o'clock a.m., February 7, 1927, and then opened, for constructing and delivering one 100-foot Diesel-Electric harbor tug. Further information on application.

U. S. Engineer Office, P. O. Box 72, Louisville, Ky. Sealed proposals will be received here until 2 P.M., Central time, January 3, 1927, and then opened, for furnishing and delivering operating machinery for Locks Nos. 47, 50, 51, 52 and 53, Ohio River. Further information on application.

U. S. ENGINEER OFFICE, NORFOLK, VA.—Sealed proposals will be received here until 12 m., January 20, 1927, and then opened, for constructing one 35-foot by 9-foot by 4-foot 1-inch motor dredge tender. Further information on application.

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If not—WHY?

0083

EMPLOYMENT

AND OTHER BUSINESS OPPORTUNITIES

Positions Wanted, 4 cents a word, minimum charge 75 cents an insertion.
Positions Vacant and all other classifications, 8 cents a word, minimum $2.

Box Numbers in care of any of our offices count as 10 words in addition to advertising copy. *Replies* are forwarded each day as received at all of our offices without additional charge. *Discount* of 10% is allowed if one payment is made in advance for 4 consecutive insertions.

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E.N.R.

POSITIONS VACANT

AN ENGINEERING construction company wishes soon to increase its field staff of construction foremen. The work contemplated is bridges and dams, requiring an experience with, and aptitude for handling mass concrete, cofferdams, subaqueous excavation and structural steel. Correspondence is desired with alert and energetic men of sound judgment, with experience enough to warrant the belief that they can organize a field force, build well and with efficiency, understand construction plant and rigging, plan operations in advance, and adhere to schedule. To such men we promise hard work and long hours. Good support will be given. We are prepared to pay for proven ability. P-362, Engineering News-Record, 7 So. Dearborn St., Chicago, Ill.

POSITIONS VACANT

APPLICATIONS for positions in a structural engineering department will be received from recent graduates of engineering schools. Experience not necessary if proper recommendations can be furnished. Apply by letter giving age, education, etc. P-339, Engineering News-Record, 1600 Arch St., Philadelphia, Pa.

A STRUCTURAL drawing room in Philadelphia has positions open for several good structural men. Apply by letter giving age, education, experience, salary expected, etc. P-340, Engineering News-Record, 1600 Arch St., Philadelphia, Pa.

POSITIONS VACANT

CHIEF engineer, a structural steel fabricating shop in Southern Ohio has opening for high-grade man to take charge of its engineering department. Must be thoroughly familiar with designing, and preparing shop details of structural steel and miscellaneous iron work for building construction. Give full particulars in first letter. P-314, Engineering News-Record, Guardian Bldg., Cleveland, Ohio.

DRAFTSMEN and checkers, experienced in making and checking shop drawings for building and bridge work. Give age, education, experience, salary expected and how soon you can report for work. McClintic-Marshall Constr. Co., 17th Floor Penna. Bldg., 15th and Chestnut Sts., Philadelphia, Pa.

A MECHANICAL ENGINEER WANTED FOR DESIGNING, DETAILING AND FIELD INSPECTION.

Must have had experience in the design of gasoline power shovels and cranes. Technical education necessary. State experience in detail, give references, age, education and desired salary and when can start.

INSLEY MANUFACTURING CO.
P.O. Box 167, Indianapolis, Indiana

WANTED

3 Concrete Road Foremen
3 Excavation Foremen
2 Road Building Superintendents

Write for interview to **Geo. M. Brewster & Son, Inc.**, Bogota, N. J., giving past experience and production. Good salary.

STRUCTURAL DRAFTSMEN

Fabricator in East has increased shop capacity and offers permanent positions to several first class structural draftsmen. Plant is located near large city with opportunity for home in city or suburbs.

P-358, Engineering News-Record
Tenth Ave. at 36th St., New York City

Structural Draftsmen

Progressive fabricating shop in Milwaukee has opening for several first-class **Structural Draftsmen.** Working conditions excellent and exceptional chances for advancement.

P-350, Engineering News-Record
7 So. Dearborn St., Chicago, Ill.

WANTED

High Grade Engineer

To take entire charge of Engineering and Development Departments of an old established engineering organization.

P-326, Engineering News-Record
Tenth Ave. at 36th St., New York City

Chief Engineer

A LARGE corporation is looking for a high grade Chief Engineer with a thorough mechanical engineering training, both technical and practical, and with executive ability. The man sought should be about 39 years old and have come up through constructive achievement to at least a five-figure salary as Chief Engineer in the design and installation of heavy mechanical apparatus. A progressive, active man on the way toward higher executive positions is the type desired.

P-335, Engineering News-Record
Tenth Ave. at 36th St., New York City

Estimator

Experienced in all classes of building construction, prominent position with a long established Construction Company in North Eastern Ohio. Write in detail experience and salary desired.

P-359, Engineering News-Record
Guardian Bldg., Cleveland, Ohio.

POSITIONS VACANT

ESTIMATOR—Solicitor to take charge in general contractors office. Must be familiar with costs and have ability to handle detail work efficiently. Good salary and chance for advancement. Reply partly giving necessary particulars. Good connections will be a consideration. P-381, Engineering News-Record, Tenth Ave. at 36th St., New York.

ENGINEER, of executive ability and enough capital to finance his own work for 30 days at a time. Must be good draftsman and field man experienced in subdivision layouts, general land surveys, drainage, irrigation, roads and streets. A man who can take over small office in a good town and country and do both field and office work. Must have own car. To the right man can offer a partnership on a precentage basis. Write and wire application with references to Ferguson Engineering Co., 220 Wittenbach Bldg., Harlingen, Texas.

SHOVEL foreman, familiar with the operation of large electric and steam shovel for work with Nitrate Company, Chile, South America. 3 year contract; transportation both ways and salary while traveling paid by company. In reply give full details. P-368, Engineering News-Record, Tenth Ave., at 36th St., New York.

STRUCTURAL detailers and checkers, experienced on mill buildings, theatres, etc. A good opportunity for a few men of more than average ability. Permanent positions to men who can produce. Give full details including minimum rate desired. Location, Michigan. P-351, Engineering News-Record, Guardian Bldg., Cleveland, Ohio.

STRUCTURAL steel detailers and checkers at least three years' experience. Give age, nationality, experience and technical ducation. Box 48, Seattle, Washington.

STRUCTURAL steel designer, estimator and salesman for large shop in South. Must be experienced in design of industrial buildings and office structures. Give full details, experience and salary expected. P-342, Engineering News-Record, 1600 Arch St., Phila., Pa.

STRUCTURAL draftsman with experience on conveyor, screens, coal tipples or similar structures. P-370, Engineering News-Record, 7 So. Dearborn St., Chicago, Ill.

STRUCTURAL engineer and designer with experience on design and construction of conveyors, screens, coal tipples or similar structures. P-369, Engineering News-Record, 7 So. Dearborn St., Chicago, Ill.

PRATT INSTITUTE
Brooklyn, N. Y.
SCHOOL OF SCIENCE & TECHNOLOGY
Evening Classes
WINTER TERM OPENS JANUARY 3RD
Mechanical Drawing, Machine Design, Structural Drafting, Structural Design, Strength of Materials, and other courses for draftsmen and designers.
Write for circular or call Monday, Tuesday or Thursday evening, except Dec. 27 to 31. Pratt Institute, Grand Ave. near DeKalb Ave., Brooklyn.

Water Power
Engineering Practice
924 So. Bend Ave., South Bend, Ind.
Hydro-electric Institute
HOME STUDY

POSITIONS VACANT

STRUCTURAL draftsman for fabricating shop in Cincinnati district. Must take full charge of the work he details. State age, experience and salary required. P-360, Engineering News-Record, Guardian Building, Cleveland, Ohio.

SUPERINTENDENT for all classes building construction in New York City, including reinforced concrete. State fully past experience, employers, types of buildings, education and salary. Information confidential. P-373, Engineering News-Record, Tenth Ave. at 36th St., New York.

YOUNG engineers with Order 3 or construction cost accounting experience wanted by railroad. Location Philadelphia. Give full qualifications, salary desired, and references. P-301, Engineering News-Record, 1600 Arch St., Phila., Pa.

EMPLOYMENT AGENCIES

AMERICAN Engineers Service, Emich Bldg., Pittsburgh. Require architectural, structural draftsmen, $300 each. Premium salary rates for all classes office engineering assistants. Eastern, Southern, Western cities. Railways, mines, refineries ,hydro power developments, power structures, industries. Planetable stadia surveyors, transitmen. Land investigations, valuations, construction. Junior engineers for Latin American railway mines, etc. We place every draftsman under $250 immediately, no waiting.

WANTED, mechanical, structural, concrete, power plant and steel plant engineers and draftsmen, also recent graduates and sales engineers. Cleveland Engineering Agency, Rose Building, Cleveland, Ohio.

TECHNICAL SERVICE
217 Broadway, New York, N. Y.
Specialists in
TECHNICAL PERSONNEL

EMPLOYMENT SERVICE

CONSTRUCTION engineers, superintendents, find our individual, confidential service effective in making new connections. Personally planned by Jacob Penn, the eminent employment authority, known to leading contractors. Refund agreement protects you. Not agency. Jacob Penn, Incorporated, 305 Broadway, New York.

IF YOU are qualified for position between $2,500 and $25,000 and are receptive to negotiations for new connection, your response to this announcement is invited. The undersigned provides a thoroughly organized service, established sixteen years ago, to conduct confidential preliminaries, and assist the qualified man in locating the particular position he desires. Not an employment agency. Retaining fee protected by refund provision, as stipulated in our agreement. Send name and address only for description of service. R. W. Bixby, Inc., 272 Main Street, Buffalo, New York.

POSITIONS WANTED

Civil Engineers

CIVIL engineer, eight years' experience on lines, grades, surveys, inspection and supervision of general construction. Wants position with contractor, owner or architect. PW-317, Engineering News-Record, 1600 Arch St., Phila., Pa.

CIVIL engineer, 28 years, 6 years' experience railroad construction, highway, subway construction, surveys, subdivision, estimating, and calculations, desires permanent connection that offers advancement. Available at once. PW-353, Engineering News-Record, 1600 Arch St., Phila., Pa.

CIVIL engineer, five years' experience, both field and office, with coal company, building contractors, and highway department. Eastern Pennsylvania preferred. Available in two weeks. PW-341, Engineering News-Record, 1600 Arch St., Phila., Pa.

And Now

WILSON COURSES
Structural Engineering.
Reinforced Concrete Engineering.
Structural Steel Designing.
Structural Drafting.
Concrete Drafting
Concrete Railway Structures.
Railway Bridge Engineering.
Concrete Highway Structures.
Highway Bridge Engineering.
Preparatory Course.

Two Famous WILSON Courses for Progressive Railway Engineers

More and more the development of reinforced concrete construction for railway structures is demanding specialized knowledge and training on the part of railway engineers engaged in this branch of work. That is why, today, the big percentage of students in our general courses in *Structural Engineering* and *Bridge Engineering* are railway engineers. They are taking advantage of the opportunity these courses offer for keeping abreast of the changing requirements of their jobs.

Anticipating the desires of many thousands of other railway engineers for a more thorough training and a wider experience in modern railway structures, we have arranged two special courses—

Concrete Railway Structures
and
Railway Bridge Engineering
(By Mail)

requiring less time to complete but which are equally as thorough in the work covered as our broader courses. Like all other famous WILSON courses, *Concrete Railway Structures* and *Railway Bridge Engineering* are designed to train students to DO THE WORK as railroads want it done. There are no tedious discussions of intricate theory—just work that leads straight to competency. This is not textbook reading, but actual work under the direction of competent engineers who have had years of experience in the fields covered.

Write for Literature

15th Year
WILSON ENGINEERING CORPORATION
College House Offices, Harvard Square, Cambridge, Mass.

POSITIONS WANTED

CIVIL engineer, graduate, 4 years' highway experience, 2 years railroad and bridge construction. 3½ years sub-division, computations and field work. Desires position in city or vicinity after Jan. 1. PW-378, Engineering News-Record, Tenth Ave. at 36th Street, New York.

CIVIL engineer, 45, rapid, 25 years' experience field and office, railroads, industrial, chemical companies. Safety engineer and plant efficiency. Available Jan. 1st, for work any part of world. PW-363, Engineering News-Record, 1600 Arch St., Phila., Pa.

GRADUATE civil engineer, 37, married, fourteen years' experience in sales, design detail-fabrication and erection of bridges and buildings. Seven years in charge fabrication and erection, desires position as plant manager or erection manager. PW-201, Engineering News-Record, 1600 Arch St., Phila., Pa.

THREE graduate civil engineers, single, desire positions in foreign country with reliable American engineering firm. General engineering experience. PW-379, Engineering News-Record, 1600 Arch St., Philadelphia, Pa.

Draftsmen & Designers

DRAFTSMAN, structural, municipal, bridges, concrete design, good tracer. Consider anything, $175 month. PW-372, Engineering News-Record, 7 So. Dearborn St., Chicago, Ill.

STRUCTURAL designer, civil engineering graduate, desires permanent position. Over 10 years' designing, drafting and checking experience on steel and concrete. Location New York. PW-332, Engineering News-Record, Tenth Ave. at 36th St., New York.

To Employers Who Advertise for Men:

The letters you receive in answer to your advertisements are submitted by each of the applicants with the hope of securing the position offered.

When there are many applicants it frequently happens that the only letters acknowledged are those of promising candidates. Others do not receive the slightest indication that their letters have even been received, much less given any consideration. These men often become discouraged, will not respond to future advertisements, and sometimes even question if they are bona fide.

We can guarantee that *Every Advertisement Printed in the Searchlight Section Is Duly Authorized.* Now won't **you** help keep our readers interested in this advertising by acknowledging **every** application received, even if you only return the letters of unsuccessful applicants to them marked, say, "Position filled, thank you." If you don't care to reveal your identity, mail them in plain envelopes.

We suggest this in a spirit of helpful co-operation between employers and the men replying to Positions Vacant advertisements.

Searchlight Department
McGRAW-HILL PUBLISHING COMPANY, INC.
"Put Yourself in the Place of the Other Fellow"

POSITIONS WANTED

DRAFTSMAN, 23, single, 4 years' general experience, technical education. Location immaterial. Frank Kinsley, 23 Third St., Schenectady, N. Y.

STRUCTURAL designer, age 35; graduate structural engineer, 7 years' experience for all classes of building, designing and detailing in structural steel and reinforced concrete; also a specification writer. 1½ years' experience on construction work as assistant superintendent; also experience as a mechanical draftsman. Moderate salary. Available at once. PW-374, Engineering News-Record, 1600 Arch Street, Philadelphia, Pa.

WANTED position as draftsman, 20 years' experience on building construction and engineering work. PW-366, Engineering News-Record, Tenth Ave. at 36th St., New York.

Estimators

ESTIMATOR seventeen years' experience all classes of building construction, seven years as executive, maintaining high average of awards, desires new connection, references and outline of experience upon request. PW-287, Engineering News-Record, Tenth Ave. at 36th St., New York.

ESTIMATOR and concrete engineer, 29 years of age, 9 years' of bar company experience, desires position with opportunity for advancement, preferably with general contractor. PW-344, Engineering News-Record, 7 So. Dearborn, St., Chicago, Ill.

Surveyors

CHIEF OF PARTY with complete field equipment, 20 years' experience, hydro projects, plane table surveys, precise city surveys including sanitary and storm sewer and pavement design. PW-365, Engineering News-Record, 883 Mission St., San Francisco, Calif.

ENGINEER—Surveyor, 26, on construction or office. Rapid, accurate computer and draftsman, own car. Vicinity of New York preferred. PW-364, Engineering News-Record, Tenth Ave. at 36th St., New York.

INSTRUMENTMAN, age 28, married, 3 years' highway and 3 years' railway location and tunnel work, familiar with drafting machine, etc. Concrete and reinforcing steel, blueprints and stadia work, desires position in South with structural organization; wants to learn structural game. Will start low where there is chance for rapid advancement. Can furnish references. Available two weeks notice. PW-343, Engineering News-Record, 1600 Arch St., Phila., Pa.

Superintendents

BUILDING superintendent, carpenter foreman, experienced in various types of construction. Technical graduate; 35, single. Now employed, but available at once. Go anywhere, but New York vicinity preferred. PW-329, Engineering News-Record, Tenth Ave. at 36th St., New York.

CONSTRUCTION engineer or superintendent, now plant engineer for large industrial corporation, wishes change. Experienced estimating, designing, purchasing, managing, supervision. F. B. Lloyd, Arden, N. Y.

CONSTRUCTION superintendent, twenty years' experience on heavy construction, accustomed to handling large organizations; available immediately; go anywhere. PW-380, Engineering News-Record, Tenth Ave. at 36th St., New York.

Position desired where following experience will be of value.
10 years in direct charge of railroad construction of considerable magnitude.
5 years manager cast iron enameling plant.
10 years contractor doing grading, concrete, track, bridge and road work.
PW-336, Engineering News-Record
1600 Arch St., Philadelphia, Pa.

POSITIONS WANTED

CONSTRUCTION superintendent and estimator desires connection with medium sized general contractor. Age 32. Nine years' good experience. C. E. graduate Rensselaer. PW-188, Engineering News-Record, 1600 Arch St., Phila., Pa.

CONSTRUCTION superintendent sewers, sewage disposal, waterworks, filter plants, paving, earth and rock excavation, concrete. Organizer and result getter. Can estimate work. Know how to handle men and equipment. Graduate engineer, age 33. Looking for place where results count. Available at once. PW-311, Engineering News-Record, 7 So. Dearborn St., Chicago, Ill.

SUPERINTENDENT, steam shovel and superintendent railroad track construction. Capable of handling large field operations. Twenty-five years' experience. Good organizer and can get results. Best of reference as to character and ability. PW-328, Engineering News-Record, 1600 Arch St., Phila., Pa.

SUPERINTENDENT construction, wide experience, results assured. Have following. Any location. Engineer. Salary can be arranged. PW-333, Engineering News-Record. 1600 Arch St., Phila., Pa.

SUPERINTENDENT or foreman, age 47, twenty years' experience on heavy construction and concrete. Will go any place. John Clayton, Box 653, Elizabethtown, Ky.

Miscellaneous

BUSINESS GETTER. Man who can get and close contracts for building construction. No financial business wanted, straight industrial work only. PW-361, Engineering News-Record, 7 South Dearborn St., Chicago, Ill.

CONSTRUCTION engineer; civil graduate, age 38, with sixteen years' experience in construction and manufacturing. Broadly experienced in administration and business in all its phases. I want to connect permanently with a firm where initiative energy and a capacity for work coupled with a sound experience can be turned into mutual benefit. Good personality, can handle men. PW-371, Engineering News-Record, 7 So. Dearborn St., Chicago, Ill.

EXECUTIVE—construction, graduate engineer desires change. Has held all positions from timekeeper to general manager of contracting concern. Strictly engineering position is not desired. During the last 15 years all my activities have been along commercial lines. Also 2 years in South America, speaking English, Spanish, German. Age 40. If offer attractive will go anywhere. PW-376, Engineering News-Record, Tenth Ave. at 36th Street, New York.

EXPERIENCED engineer. If you have a hydro or irrigation project, I'm your man with complete field equipment. Write now for early Spring engagement. PW-357, Engineering News-Record, 1600 Arch St., Philadelphia, Pa.

HOISTING engineer, experienced on all makes floating dredges, Northwest gasoline cranes, stiff derricks, steam, electric or gas operating clamshell buckets. Have held position of master mechanic. Understand overhauling and handling most makes of hoisting machinery. PW-354, Engineering News-Record, 7 So. Dearborn St., Chicago, Ill.

ATTENTION INVESTMENT HOUSE

Executive trained engineer with legal knowledge wants permanent connection with Eastern investment house with headquarters to be maintained in Oklahoma, to investigate and report on public or private investments; special improvements and utility bonds. Splendid references; just leaving a 10-year engagement as Executive Engineer, in charge several millions expenditure. 40 years of age and well established in Oklahoma—could cover large territory in middle West. Must be permanent with advancement and opportunity to use self initiative.

Address DAN W. PATTON
Box 940, Tulsa, Okla.

POSITIONS WANTED

GENERAL foreman construction, experienced on concrete buildings, bridges and docks. Location immaterial. Available at once. PW-316, Engineering News-Record, 1600 Arch St., Phila., Pa.

MECHANICAL engineer, member A.S.M.E., age 37, sixteen years' experience design, construction, operation and maintenance high duty pumping plants and pipe lines, seven years as superintendent of crude oil pipe line, A-1 references, salary open. PW-337, Engineering News-Record, Tenth Ave. at 36th St., New York.

MECHANICAL engineer, age 32, technical; desires position assuring future, salary secondary; twelve years' experience along general mechanical and construction lines, organization, estimating, designing, supervision. PW-367, Engineering News-Record, Tenth Ave. at 36th St., New York.

WORK WANTED

Estimates and Expert Opinions

If you are rushed in preparing estimates for construction work or require expert opinion for arbitration proceedings or law suits write, WW-377, Engineering News-Record, Tenth Ave. at 36th Street, New York. Have prepared final estimates for most of the largest contracting concerns in New York City and my records prove my qualifications for above work. Have adjusted successfully cases for claims of damages, time limit contracts and other disputed matters for contractors and owners as well. Compensation reasonable.

SALESMEN WANTED

Salesman Wanted

Experienced man for selling a general line of road, sewer and building contractors equipment, preferably acquainted in Philadelphia district. Replies confidential. Staley and Morris, Inc., 214 N. 22nd St., Phila., Pa.

SALESMEN AVAILABLE

SALES representative. Engineer, 20 years' design and construction railroad, waterworks, chemical and industrial plants, power houses and municipal work. In touch with architects, engineers and contractors in two large Eastern seaboard cities. Would like to get in touch with company desiring a representative to handle equipment or a product of merit that would be of use to architects, engineers, contractors or plant managers. SA-331, Engineering News-Record, 1600 Arch St., Phila., Pa.

TUTORING

CIVIL engineer teaches arithmetic, algebra, geometry, trigonometry, calculus, drafting, architectural, mechanical, structural, topographical surveying, prepares civil service engineering examinations, rodman, transitman, engineering assistant, engineering inspector. Mondell, 1440 Broadway, New York, Telephone Pennsylvania 3017.

PATENT ATTORNEY

Inventions Commercialized

On cash or royalty basis. Patented or unpatented. In business twenty-four years. Complete facilities. Reference Write Adam Fisher Mfg. Co., 529 Enright, St. Louis, Mo.

PARTNER WANTED

A well-established concern well equipped for highway construction, good reputation in whole of the New England States, wishes to make connection with a good reliable man, as an assistant.
$10,000 required to join. Give full details in letter.
BO-347, Engineering News-Record
Tenth Ave. at 36th St., New York City

WANTED
Additional Products to Manufacture

Corporation operating plant in Western Pennsylvania. Have large acreage and railroad siding into plant. Address
WM. H. BARR
1917 Oliver Bldg., Pittsburgh, Pa.

FOR RENT
Three Erie Steam Shovels

Caterpillar traction. Will be interested in either renting shovels or taking grading contract.
Fitzpatrick Bros., Lamont & Calvi
Ironwood, Michigan

STEAM SHOVELS

FOR HIRE
Erie Dreadnaught Steam Shovels
High lift—Caterpillar—Yard dipper
$65 per day with crew.
TOMPKINS HAULAGE CORPORATION
234 Sumner Ave., Brooklyn, N. Y.
Phone: Decatur 0157.

For Rent With Operator
Keystone Excavator

Front crawler, gas drive. Available on one week's notice.
F. D. LEFFINGWELL, Montclair, N. J.

Crane For Rent

Northwest 10-ton, caterpillar, gasoline Crane with operator. Forty foot boom.
JAS. S. BRADEN
30 Church St., New York City

ENGINEERING SALESMEN

Several splendid openings with manufacturer of steel building products for experienced engineering salesmen. Location Central West. Applicants must state their experience in selling, their age, nationality, education, whether married or single, salary expected and date available. Information will be considered confidential.

AS-240, Engineering News-Record
Tenth Ave. at 36th St., New York City.

Crane and Excavator Salesmen

Two good salesmen are wanted in our organization for general traveling, one of these men must be familiar with the sale of shovels, cranes, draglines, etc. The other should be familiar with truck cranes.

In reply please state age, education, experience, salary expected and give references among your past employers to whom we are free to apply.

Send a recent photo or snapshot of yourself and state what compensation you would expect to start.

All applications will be held strictly confidential.

Harnischfeger Corp.
Milwaukee, Wis.
Builders of P. and H. Excavators

USED REBUILT
SURVEYING INSTRUMENTS
SALE — RENT REPAIRING

TRANSITS & LEVELS

REPAIRING
Now is the time to have your instruments repaired. Instruments will be shipped and billed when needed. Estimates cheerfully given.
Cleaning and adjusting as low as $10.00.
Instrument Dept.
New York Blueprint Paper Company
102 Reade St., New York City

RE-BUILT REPAIR RENT

BUFF
46 Dey St., New York

Second-Hand Transits and Levels

Guaranteed in Good Order and Adjustment
Write for New Bargain List
WILLIAMS, BROWN & EARLE, INC.
918 Chestnut St., Philadelphia, Pa.
Department D

LARGEST STOCK OF USED SURVEYING INSTRUMENTS IN THIS COUNTRY
Satisfaction guaranteed or money refunded. Write for complete list and catalogue of our high grade instruments and supplies for civil engineers, surveyors, mining, builders, contractors, etc.; 40 years' experience in repairing instruments of all makes at reasonable prices. Prompt service.
WISSLER INSTRUMENT CO.
607 N. Broadway, St. Louis, Mo.

TRANSITS AND LEVELS

Rebuilt—All Makes—SALE or RENT
Write for list N-27
Specialists on Instrument Repairs
Expert Work—Prompt Service—Estimates Free
WARREN-KNIGHT CO.
Makers of "Sterling" Instruments
136 N. 12th St., Philadelphia, Pa.

For Quick Disposal
Used Transits and Levels
Rebuilt, guaranteed, GURLEY'S and other good makes from $50 up. *Act quickly.* Instruments Rented or Exchanged. *All makes repaired*, reasonable prices.
J. H. WEIL & COMPANY
1325 Cherry St., Philadelphia, Pa.
Established 35 years.

TO HELP YOU

RENT, LEASE, OR EXCHANGE EQUIPMENT
"Searchlight" Advertising
G-8

We know of so few Blaw-Knox Dreadnaught Buckets out of service and available for resale that we have been unable to fill requests from customers who wish to purchase or rent a used bucket.

Dreadnaught users wishing to dispose of their Buckets should send data on *Size No., Shop No., Condition, Location* and Price. We will gladly put these Buckets on our stock lists and assist in making sale.

BLAW-KNOX CO.
Pittsburgh, Penna.

FOR SALE

Contractors' Equipment

4—1¼-yd. **Baker Maney Graders.**

1—**Austin Western Rip Snorter Grader.**

1—3-drum **O.K. Clutch Machinery Co., Columbia, Pa., Hoist,** powered with 6 cyl. Beaver Motor—1,500 ft. ⅝-in. Cable, 2,200 ft. ¾-in. Cable—1,500 ft. of new ⅝-in. Cable—"A" Frame Sheaves and 60-ft. mast with guys and turnbuckles. 1—2-yd. L. P. Green Bottomless Bucket.

1—**Russell Gravel Screening Plant**—large size, double Shaker Screen. 5-yd. Bin and Sand Bin. 60-ft. Belt Conveyor. 1—8x24-in. Universal Crusher and Bucket Conveyor, Complete.

C. C. HARA, Contractors
Niles, Michigan

Wanted For Export

40-ton **Locomotive Crane, Brown Hoist or Industrial,** 1½-yd. orange peel bucket.
15 to 20-ton **Brown Hoist** 8-wheel standard gauge **Locomotive Crane.**
15 to 20-ton **Brown Hoist,** 4-wheel, 15 ft. gauge or **Gantry Crane.**
2—Botton Dump **Coal Cars,** all steel, 80,000 to 100,000 lb. cap.
1—50 to 60-ton **Switcher Locomotive,** Oil Burner, standard gauge.
400 ton 80 lb. **Relaying Rail.**

Please give location, age, general condition and price of equipment offered in first letter.

W-375, Engineering News-Record
Tenth Ave. at 36th St., New York City

Hoisting Engines

1—Standard Double Cylinder Double Friction Drum Hoisting Engine, drums 14-in. dia., engine cylinders **7-in. dia.** x 10-in. stroke.

1—Boss No. 2 Single Drum Hoisting Engine with 6 h.p. Gas Engine.

3—Wonder Single Drum Hoisting Engines, type 7-R, single line pull 1500 lbs., with 7 h.p. Wonder Gas Engine.

Nashville Industrial Corporation
Old Hickory, Tennessee

WANTED

1—25 hp., 2-35, 2-50 to 75 hp. **Double Drum Electric Hoists.**
2—**Double Drum belted.**
1—½-yd., and ¾-yd. **Clam Shell Buckets.**
1—¾-yd. **Gasoline Shovel.**
1—75 to 100 ft. **Steel Stiff Leg Derrick.**

M. A. WEINREIS
246 Oregon St., Milwaukee, Wis.

LOCOMOTIVE BOILER

FOR SALE OR RENTAL

125 HP. 125 lbs. ASME code. Complete, for immediate shipment.

WICKES MACHINERY COMPANY
Jersey City, N. J.
Phone: Bergen 8500

WANTED

Have just secured large Contract for Road and Bridge job and need considerable equipment. Give complete details and prices of what you have to offer.

W-325, Engineering News-Record
7 Sc. Dearborn St., Chicago, Ill.

CONCRETE MIXER

1—Jaeger Concrete Mixer, No. 7 H-1, with hoist, and 8 hp. gasoline engine. Good condition.

NASHVILLE INDUSTRIAL CORPORATION
Old Hickory, Tennessee.

FOR SALE

MACHINERY FOR 18 IN. SUCTION DREDGE

BARGAIN

H. P. GUION,
50 Church St., New York City

LOCOMOTIVES

FOR SALE

8—6-wheel Switching Locomotives, 50 to 60-ton capacity. In serviceable condition. At a very attractive price.

STANDARD RAIL & STEEL CO.
Madison, Ill.

1—45-50-hp. Otto **Diesel Engine.**
1—500-hp. **Nagle Corliss Engine.**
1—10-ton **Monarch Roller,** 3 wheel.
1—5-ton **Buffalo Tandem Roller.**
1—**No. 3 Keystone Grader.**

CABLE EXCAVATOR COMPANY
Fernwood, Del. Co., Pa.

FOR SALE

IRON SMOKE STACK

5 ft. diameter, 100 ft. long, excellent condition. Prompt shipment.

PFAFF & KENDALL
96 Waydell St., Newark, N. J.

FOR SALE—ALL STEEL

GUY DERRICK

10-ton capacity. Mast 90 ft. Boom 80 ft. Complete.

E. P. GALER
94-96 Park Place, New York City

CENTRIFUGAL PUMPS

6—16-in. Type S Allis-Chal. with 300 hp. Turbine.
5—14-in. Worthington Class B with 300 hp. Motor.
3—14-in. Type S Allis-Chal. with 300 hp. Turbine.
35—6-in. Baker, Belt Drive.
45—4-in. Baker, Belt Drive.
3—3-in. Gould, Belt Drive.
1—4-in. Brooks, Belt Drive.

NASHVILLE INDUSTRIAL CORPORATION
Old Hickory, Tennessee.

OFFICIAL NOTICE NO. 247

Published by Authority of the Common Council of the City of Milwaukee.

SALE OF PUMPING ENGINES, BOILERS, Etc.

Milwaukee, December 22, 1926.

Sealed proposals will be received at the office of the Commissioner of Public Works until Tuesday, January 25, 1927, at 10:30 o'clock a.m., for the purchase of the following equipment belonging to the Water Works of the City of Milwaukee, located at the High Service Pumping Station of the Milwaukee Water Works on North Avenue between Tenth and Eleventh Streets, Milwaukee, Wis.

One six-million gallon daily capacity Vertical Triple Expansion Condensing Pumping Engine with three direct connected plungers, crank and flywheel type, built by E. P. Allis Company in 1887.

Weight—170 tons.
Steam pressure—100 pounds.
Delivery Head—125 feet.
Diameter of High Pressure Cylinder —20¾ inches.
Diameter of Intermediate Pressure Cylinder—35 inches.
Diameter of Low Pressure Cylinder —49 inches.
Diameter of Pump Plungers—21⅛ in.
Stroke of piston and pumps—36 inches.

This pumping engine is in fair condition.

One eight-million gallon daily capacity Vertical Triple Expansion Condensing Pumping Engine with three direct connected plungers, crank and flywheel type, built by Allis Chalmers Manufacturing Company in 1892.

Weight about 225 tons.
Steam pressure—100 pounds.
Delivery Head—130 feet.
Diameter of High Pressure Cylinder —21 inches.
Diameter of Intermediate Pressure Cylinder—36 inches.
Diameter of Low Pressure Cylinder —51 inches.
Diameter of Pump Plungers—23⅛ in.
Stroke of piston and pumps—36 inches.
Duty about 130,000,000 foot pounds per 1,000 pounds of steam.

This pumping engine is in good condition.

One eight-million gallon daily capacity Vertical Triple Expansion Condensing Pumping Engine with three direct connected plungers, crank and flywheel type, built by Allis Chalmers Manufacturing Company in 1904.

Weight about 275 tons.
Delivery Head—130 feet.
Diameter of High Pressure Cylinder —21 inches.
Diameter of Intermediate Pressure Cylinder—36 inches.
Diameter of Low Pressure Cylinder —52 inches.
Diameter of Pump Plungers—22⅞ inches.
Stroke of piston and pumps — 36 inches.
Duty about 139,000,000 foot pounds per 1,000 pounds of steam.

This pumping engine is in very good condition.

Four 62" x 18' Horizontal return tubular boilers with Hawley Down Draft Furnaces—100 pounds steam pressure. These boilers were built in 1896.

Bidders may bid on one or more of the above items.

Tie bids, when the higher ones, will be decided by the Common Council.

The successful bidder must remove the equipment from the premises at his own cost and expense within ninety (90) days from the date of the purchase.

The purchaser must pay for the equipment before removing same from the premises.

Pursuant to resolution of the Common Council adopted November 22nd, 1926, File No. 33882, all bids received by the Commissioner of Public Works will be referred by him to the Common Council before acceptance.

Signed:
R. E. STOELTING,
Commissioner of Public Works.
Countersigned:
LOUIS M. KOTECKI,
Comptroller.

USED EQUIPMENT

AND NEW, OFFERED FOR RE-SALE

Space for these advertisements is sold by the advertising inch—30 inches to a page. The price per inch is based on total space used—multiply ad space by number of insertions.

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RATES FOR LARGER SPACES, OR SPACE ON A YEARLY BASIS, FURNISHED ON REQUEST.

E. N.-R.

ALPHABETICAL INDEX TO ADVERTISEMENTS

GENERAL CONTRACTORS EQUIPMENT

Ambler, H. C. 115
Armstrong, Inc., Archer 128
Barr, Wm. H. 120
Beck, Riley & Hall Equip. Co. 123
Birmingham Rail & Loco. Co. 126
Blaw-Knox Co. 121
Braden, Jas. S. 120-127
Brereton, W. P. 125
Briggs, Inc., Marvin 125
Brown & Sites Co. 128
Buff 120
Cable Excavator Co., The 121
California Equip. Co. 129
Clapp, Riley & Hall Equip. Co. 123
Crane Service Co. 127
Deline & Elmes 123
Dupree & Sheehan 123
Earth, Rock & Equip. Co. 125
Ellis, A. Lee 127
Equipment Corp. of America .. 125
Erie Steam Shovel Co. 123
Fitzpatrick Bros., Lamont & Calvi 120
Forsythe Bros. 124
Frank, M. K. 129
Galer, E. P. 121
General Equipment Co., Inc., N. Y. C. 122
Gulon, H. P. 121-123-128
Green Ry. & Equip. Co., L. A. 127
Grey Steel Products Co. 125
Haiss Mfg. Co., Inc., Geo. 123
Hara, C. C. 121
Harnischfeger Corp. 120
Hitner's Sons Co., Henry A. ... 124
Hoisting Machinery Co. 127
Hyman-Michaels Co. 129
King, Philip T. 127
Kramer, E. T. 123
Lane Equip. Co., The T. J. 126
Leffingwell, F. D. 120
Levis & Co., Henry 129
Lewis, Harry C. 124
Lindheimer, S. W. 128
McElroy, James 126
McMyer-Interstate Co. 127
Marine Metal & Supply Co. ... 126
Milwaukee, City of 121
Morris Engr. Co. 124
Nashville Ind. Corp. 121-126-128-129
National Hoisting Eng. Co. 128
Neuberg, Wm. D. 123
New York Blue Print Paper Co. 120
Pickett, John F. 128
Pfaff & Kendall 121
Pierce Foundation Corp. 128
Pittsburgh Pneumatic Mchy. Co. 125
Poliakoff, R. 125
Pulsometer Steam Pump Co. ... 124
Rennolds Equip. Co. 124
Scranton Gas & Water Co. 126
Sherwood, E. C. 129
Snyder Engineering Corp. 124
Southern Iron & Equip. Co. .. 122
Standard Rail & Steel Co. 121
Trevor Co., H. B. 129
Tompkins Haulage Corp. 120
United Commercial Co. 124
Warren-Knight Co. 120
Weil & Co., J. H. 120
Weinreis, M. A. 121
Weiss, B. M. 127
Wemlinger Co., J. R. 128
Wickes Machinery Co. 121-124
Williams, G. C. 127
Williams, Brown & Earle, Inc. 120
Wissler Instrument Co. 120
Zelnicker Supply Co., W. A. ... 128

PILING

Brown & Sites Co. 128
Equipment Corp. of America .. 128
Lindheimer, S. W. 128
Wemlinger Co., J. R. 128
Zelnicker Supply Co., W. A. ... 128

PIPE

Albert & Davidson Pipe Corp. 126
Albert Pipe Supply Co. 126
Columbia Steel & Tube Corp. . 126
Flower City Pipe & Iron Corp. 126
Greenpoint Iron & Pipe Co., Inc. 126
Hudson Pipe Supply Co. 126
L & D Pipe Supply Co., Inc. ... 126
Marine Metal & Supply Co. ... 126
Nashville Ind. Corp. 121-129
Pfaff & Kendall 121
Zelnicker Sup. Co., W. A. 128-129

RAILS

Birmingham Rail & Loco. Co. . 126
Briddell Co., Inc., W. C. 129
Equip. Corp. of America 125
Foster, L. B. 129
Frank, M. K. 129
Green Ry. & Equip. Co., L. A. 127
Hyman-Michaels Co. 129
Levis & Co., Henry 129
Lindheimer, S. W. 128
Morrison & Risman Co. 129
Nashville Ind. Corp. 129
Sherwood, E. C. 129
Southern Iron & Equip. Co. ... 122
Standard Rail & Steel Co. 121
Zelnicker Sup. Co., W. A. 129

DUMP CARS

17—Western Heavy Duty 12-yd., 19-ft. bed Box Girder Doors.

12—Goodwin All-Steel 30-yd. capacity Center and Side Dump.

CARS

20—80,000 lbs. capacity 41 ft. std. gauge Flat Cars. All new woodwork.

300—80,000 lbs. capacity, std. gauge, 36-ft. Gondolas. Steel draft arms.

50—60,000 lbs. capacity 36 ft. steel underframe Box Cars.

200—100,000 lbs. capacity, 41-ft. Composite Gondolas. Steel underframe.

20—100,000 lbs. capacity, all steel self clearing Hopper Cars.

LOCOMOTIVES

1—11x16 Porter Std. Ga., 4-wheel Saddle Tank, A.S.M.E. Built 1922.

1—16x24 American, Std. Ga., 4-wheel Saddle Tank A.S.M.E. 50 tons.

1—17x24-in. Vulcan Std. Ga., 6-wheel Saddle Tank A.S.M.E. 60 ton.

3—19x26-in. American std. gauge, 6-wheel switchers, independent tender.

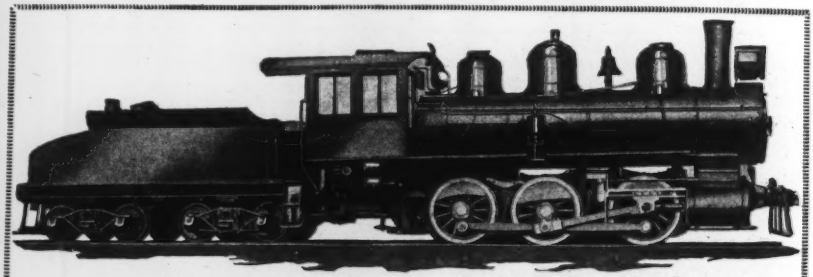
3—20x26 American std. ga., 6 wheel switchers, 72 tons.

2—20x26-in. American std. gauge, superheated, 6-wheel Switcher. Separate tender.

General Equipment Co., Inc.

342 Madison Avenue, New York, N. Y.

Pittsburgh Chicago Cleveland



55-ton, 18x24-in. American Locomotive Co. 6-Driver Switcher; butt strap boiler, 180 pounds steam pressure, 44-in. wheel centers, 11-ft. wheel base, straight and automatic air brakes, electric headlights front and rear, built 1910. Now equipped as oil burner but will convert for coal if desired.

We have over Forty Locomotives in Stock, Overhauled and Ready. All Types, Rod and Geared, 7 to 100 Tons, Narrow and Standard Gauge.

ALSO

Cars (all kinds), Steam Shovels, Rails, Cranes, Draglines, Etc.

OVERHAULED—IMMEDIATE SHIPMENT FROM STOCK

DUMP CARS

10—12-yd. Western, 2-way, air dump, steel underframe, steel beam, std. gauge.
14—6-yard, Western, 2-way, hand dump, steel beam, new bodies, std. gauge.
10—4-yard, Western, 2-way, hand dump, steel beam, new bodies, 36-in. gauge.

SOUTHERN IRON & EQUIPMENT CO.

Est. 1889

Atlanta, Ga.

FOR SALE OR RENT

All equipment overhauled in our Shop is furnished in guaranteed condition, subject to thirty days' trial in service.

STEAM SHOVELS—RAILROAD TYPE

1—95-C Bucyrus. Shop No. 1235, 5-yd.
1—Model 80 Marion. Shop No. 1312, 4 yd.
4—70-ton Bucyrus. Shop Nos. 920, 939, 977 and 1233. 2½-yd. dippers.
1—Model 60 Marion, Shop No. 2238, 2½-yd. dipper.
3—60-C Bucyrus. Shop Nos. 1286, 1388 and 1640. 2½-yd. dippers.
1—45-C Bucyrus. Shop No. 1202. 1¾-yd. dipper.

SHOVELS—FULL REVOLVING

2—50-B Bucyrus. Shop Nos. 3821 and 4216, caterpillars, 26-ft. boom, 17-ft. stick and 1¾-yd. dipper. Oil burner.
1—37 Marion, Shop No. 4773, 32 ft. boom, 22 ft. dipper arm 1¼-yd. dipper. Caterpillars.
4—Type "B" Eries. Shop Nos. 559, 1027, 1484 and 1614, high lift, ¾-yd. dippers. Steel caterpillars.
1—Osgood 18, Shop No. 1002, standard boom, ¾-yd. dipper. Steel caterpillars.
1—Model 21 Marion. Shop No. 4294, steel caterpillars, ¾ yd.
1—Model 21 Marion Gas-Electric. Shop No. 4550, caterpillars, standard boom, ¾-yd. dipper.
1—Type O Thew, Shop No. 1777, high-lift, traction wheels, 2/3-yd. dipper.
1—18-B Bucyrus. Shop No. 1870, ⅞-yd. dipper. Traction.

SIDE DUMP CARS

8—30-yd. Western All-Steel Air Dump.
43—20-yd. Western, all-steel, air dump.
12—18-yd. Western, all-steel.
95—16-yd. Western, wood beds, air dump.
28—12-yd. Western Sid Dump, wood beds.
10—6-yd. K. & J. Steel Sills Truss-rod doors. Located Burmaugh, Ky.
8—6-yd. Continental, std. gauge, wood beds, steel sills.
19—4-yd. K&J, 36-in. gauge, wood sills.
12—4-yd. Western 36-in. ga., heavy duty.

STEAM SHOVEL PARTS

All repair parts on hand for Model 60 Marion and standard 70-ton Bucyrus Steam Shovels.
1—Std. boom, dipper arm and ¾-yd. dipper for Type "B" Erie.
2—32-ft. and 40-ft. steel boom, drum, etc. for Type "B" Erie Crane.

LOCOMOTIVES

1—19x24 Baldwin 6-wheeled Saddle Tank. Shop No. 49553. Weight 67 tons, 180 lb. steam pressure. Air brakes.
1—18x24 American Six-wheeled Switcher. Shop No. 47677, weight 52 tons, 170 lb. steam pressure.
2—16x24 Davenport 4-wheeled switchers, Shop Nos. 858 and 860. Wt. 40 tons. Air brakes.
2—11x16 Vulcan 4-wheeled Saddle Tanks. 36-in. ga. Shop Nos. 1621 and 3411, wt. 21½ tons.
2—10x16 Davenport, 36-in. ga. 4-wheeled Saddle Tanks. Wt. 19½ tons. A.S.M.E. and Ohio Std. boilers. New 1922.
2—10x16 Baldwin, 36-in. ga., 4-wheeled Saddle Tanks. Wt. 19½ tons. Shop Nos. 12161 and 28353.
4—7x12 Davenport and Vulcan, 24-in. gauge, 9-ton dinkies.

DRAGLINE EXCAVATORS

2—Class 24 Bucyrus. Shop Nos. 859-903, skids and rollers or equalizing trucks, 100-ft. booms, 3½-yd. Page buckets. A.S.M.E. boilers.
2—Class 20 Bucyrus Draglines. Shop Nos. 740 and 813, 85-ft. booms, 2½-yd. dragline buckets. Skids and rollers.
2—Class 14 Bucyrus, steam operated. Shop Nos. 2140 and 3706, steel caterpillars, 60-ft. boom, 2-yd. bucket, A.S.M.E. boiler.
1—30-B Bucyrus. Shop No. 3641, steel caterpillars, 40-ft. boom, 1-yd. Page bucket.
1—No. 2 Monighan steam operated. Shop No. 789, skids and rollers, 60-ft. boom, 2-yd. Page bucket.
1—Model 210 P&H Gasoline Dragline, Shop No. 1077 Armored caterpillars, 40-ft. boom, 1-yd. Page bucket.
1—Model 21 Marion Gas-Electric, Shop No 4550, caterpillars, 36-ft. boom, ¾-yd. Page bucket.
1—Complete Caterpillar arrangement for Class 14 Bucyrus Dragline.

SPREADER CARS

2—Std. gauge Western Spreader.

CRANES

1—Type "B" Erie. Shop No. 1027, 36-ft. boom, bucket operating, ¾-yd. clam shell.
1—15-ton Brownhoist 8-wheeled Crane. Shop No. 4520.
1—20-ton McMyler, No. 388, 50-ft. boom, bucket-operating.
1—21-ton Industrial 8-wheeled Crane. Shop No. 2706. 50-ft. boom, bucket operating.
1—30-ton Industrial 8-wheeled MCB type. Shop No. 3261, 55-ft. boom with 20-ft. extension, bucket-operating

BUCKETS

2—1½-yd. Page Dragline Buckets.
1—2-yd. Page Dragline Bucket.
1—1-yd. Class "M" Page Dragline Bucket.
1—Class "H" 2½-yd. Page Dragline Bucket.
1—1½-yd. Mead Morrison Clam Shell.
2—1¼-yd. O. & S. Clam Shell.

MISCELLANEOUS

1—10-ton Austin 3-wheeled Gaso. Roller.
1—60-ton Lidgerwood Unloader with side plows.
1—No. 7-S Knickerbocker Concrete Mixer, with power loader and water tank on trucks. New.
1—American Railroad Ditcher No. 459.
1—8-ft. Austin Giant Road Grader.
1—6½x10 D.C., D.D. American Hoist, with butt strapped boiler.
35—Milburn Carbide Lights.
1—No. 55 Buhl Portable Air Compressor.
1—Set Pile Driver Leads. 42-ft. long.
12—New Drag Scoops.
1—Model 10 Keystone Mixer, low charger, 6 Hp. Novo Gas Engine.
1—No. 6 Keystone Mixer, 3 Hp. Novo Engine.

CLAPP, RILEY & HALL EQUIPMENT CO., 14 No. Clinton St., Chicago, Ill.
BECK, RILEY & HALL EQUIPMENT CO., 458 Union Trust Bldg., Pittsburgh, Pa.

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DERRICKS

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SOLD
REPAIRED
ERECTED

Send your inquiry.

DELINE & ELMES
Phone Rector 2552 New York City

ERIE Shovel

Rebuilt at Factory

HIGH LIFT "B" ERIE STEAM SHOVEL

with 19 ft. 6 in. boom, 16 ft. dipper handle, power operated boom hoist, 2 speed traveling gears. Either caterpillar type mounting or traction wheels; longer boom and dipper handle can be furnished.

This machine has been completely overhauled and rebuilt at the factory with all wearing parts renewed. Is in first-class condition, and carries the same guarantee as a new ERIE. Ready for immediate delivery.

Erie Steam Shovel Co., Erie, Pa.
Builders of ERIE Steam and Gas+Air Shovels and Cranes.

CONTRACTOR'S EQUIPMENT
Bought Sold Repaired

STEAM SHOVELS:
3—Heavy duty Osgoods, on caterpillars.
1—Type B, Erie, on caterpillars.
1—Al Thew, on wheels.

COMPRESSORS:
4—late model, 212 ft., Chicago Pneumatics.
1—250 ft. Ingersoll Rand, 8 months old.

Derricks, Hoisting Engines, Mixers, Gasolene Locomotives, Koppel Cars, Track, Clamshell, Orange Peel and Dragline Buckets.

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Phone: Ludlow 7475

ERIE "B" SHOVEL
CATERPILLAR

With or without crane rigging

WM. D. NEUBERG
149 Broadway, N. Y. C.

FOR SALE

6—12-yd. also 3—16-yd. Automatic Air Brake and Air Side Dump Control Western W.S.C., Wood Body Cars.
Marion 36 Revolving Steam Shovel 1½-yd. 45 ton, Traction Wheels.
Bucyrus 2½-yd. 70 ton Shovel Standard Gauge Railroad Type.

E. T. KRAMER
1337 W. Erie Ave., Philadelphia, Pa.

FOR SALE

1—Dragline, 110 ft. Steel Boom, on skids and rollers, 3-yd. Bucket.
1—Dragline, Marion 32, steel caterpillar.
1—Marion Steam Shovel, Model 31, caterpillar.
1—Type "B" Erie Shovel, caterpillar.
1—Type "A" Erie Shovel, caterpillar.
5—18-ton Porter Locomotives, 36-in. gauge.
1—6-ton Gasoline Locomotive, 36-in. gauge.
1—5-yd. orange peel Bucket.
1—1½-yd. orange peel Bucket.
1—1½-yd. Dragline Bucket.
1—Electric Cableway.

H. P. GUION
50 Church Street, New York
Cortlandt 0774

CLAM SHELL BUCKETS
FOR SALE OR RENT

2—½ Yd. Narrow Type Digging Buckets with Teeth. Rebuilt.
1—Haiss 1 yd. "CONTRACTOR" type, factory rebuilt.
1—Haiss ¾ yd. "CONTRACTOR" type, factory rebuilt.
1—Haiss ½ yd. "CONTRACTOR" type, factory, rebuilt.

TRUCK LOADERS

1—Haiss Creeper Path Digging Truck Loader, factory rebuilt, equipped with 37 HP. Waukesha engine.
1—Haiss Digging Loader, electric driven, factory rebuilt.
1—Link-Belt Loader, electric driven, factory rebuilt.

GEORGE HAISS MFG. CO., INC.
141st to 142nd Sts., on Park Ave., Canal Place and Rider Ave., New York City.

HOISTING ENGINES (Gasoline)

2—30 hp. American D.D. and **swinger.**
2—50 hp. American D.D. and swinger.

HOISTING ENGINES (Electric)

2—65 hp. Lambert double drum and swinger, A.C. or D.C. motors.
30—37 hp. American double drum and swinger, A.C. or D.C. motors.
1—52 hp. Clyde double drum and swinger.
2—30-hp. Single Drum.

HOISTING ENGINES (Steam)

1—Lidgerwood 12x12, 4 drum, with 2 Independent Winch Heads.
1—Lidgerwood 12x12, double drum.

DERRICKS

30—American timber stiff leg derricks, 14x14 timbers, 65-ft. to 70-ft. booms, 12-ft. all steel bull wheels.
1—Clyde all-steel stiff leg derrick, 65-ft. boom, 12-ft. bull wheel.

CRANES

1—22-ton Industrial locomotive crane, 8-wheel MCB, A.S.M.E. boiler, double drums, 45-ft. boom.
1—Byers Autocrane, on traction wheels, gasoline operated, 30-ft. boom, ½-yd. bucket.
1—Buffalo 7½-ton, 4-wheel Locomotive Crane, 35-ft. bm., dble. drum, like new.
1—Brownhoist, 10-ton electrically operated, mounted on structure 12-ft. high 32-ft. boom, double drum.
1—Terry Stationary, full revolving, 90-ft. boom.

Send us your inquiry for any type of Construction Equipment.

30 Church St., New York City
Tel. Cortland 6272-3

Forsythe Brothers

Warehouse and Yards:
374-390 Kent Ave., Brooklyn, N. Y.

LOCOMOTIVES

1—60-ton 6-wheel standard gauge Saddle Tank, new A.S.M.E. boiler, electric head lights, oil burning equipment.
1—14x22 cylinder, 4-wheel Saddle Tank Locomotive, automatic and straight air, A.S.M.E. boiler.

CATERPILLAR SHOVELS

1—68C Bucyrus electrically operated shovel on caterpillars.
1—20B Bucyrus Steam Shovel on caterpillar.

LOCOMOTIVE CRANES

1—30-ton Ohio factory rebuilt and guaranteed.
1—25-ton Ohio factory rebuilt and guaranteed.

CARS

All sizes and types.

Morris Engineering Co.
Phone: Cortland 0604
30 Church St., New York

DREDGING PUMP

10-in. Worthington, horizontal, class "E" centrifugal dredging pump. Chrome steel lined, steel impeller. Capacity 3,000 GPM at 40 foot head. Belt Drive.

WICKES MACHINERY COMPANY
Jersey City, N. J. Phone: Bergen 8500

Contractors' Equipment

20—Standard gauge Gondola 50-ton Bottom Dump Steel Cars.
96—20-in. gauge Ore Cars.
50—36-in. gauge Ore Cars.
4—30-in. gauge Gondola 15-ton Side Dump Ore Cars.
13—Electric Locomotives, 36-in. gauge, from 3 to 25 tons.
New and Relaying Rails, Frogs, Switches, etc.

Send for complete stock list.

UNITED COMMERCIAL CO.
234 Steuart St., San Francisco
Los Angeles Portland Seattle
Hyman-Michaels Co., Chicago

It costs no more to rent NEW

PULSOMETER STEAM PUMPS

Direct from the Factory—Backed by Service

You get *new* pumps. And eventually you can own one by our convenient payment method. Remember charges are *no higher* for this factory proposition.

Flexible Metallic Steam Hose and Fittings

For pressures up to 500 pounds. We will rent new Pulsometers fully equipped with all necessary hose and couplings—*complete*, ready for service, guaranteed

You can depend on the Pulsometer Company reputation for equipment and service.

Several 8-inch sizes for spot delivery

Pulsometer Steam Pump Co., 221 W. 41st St., New York City
(3)

FOR SALE CHEAP

1—20/25-ton **Industrial Locomotive Crane** D.D. A.S.M.E. boiler, 8 wheel, 50 ft. boom. Can be seen in operation now.
1—26-ton **Baldwin St. Ga. Gas. Locomotive.**
1—D.D. and swinger **Electric Hoisting Engine,** with 25 or 40 hp. motor, Hayward Holding drum.
1—**D.D. Mead-Morrison Hoisting Engine,** 8¼x10, skeleton.
1—¾-yd. **Haiss Clam Shell Bucket.**
4—1¾-yd. **Mead-Morrison C.S. Buckets.**
12—New V-shaped **Koppel**—2 yd. bodies.
2—14-ton, 36-in. ga. **Baldwin Locos., S.T.**
1—7½-ton, 36-in. ga. **Vulcan Loco., S.T.**
1—60-hp. **A.S.M.E. Loco. Type Boiler.**
1—**McKiernan-Terry No. 9-B Steam Ham'r.**
1—**Marion** model No. 28, ¾ cu.yd. **Steam Shovel** on traction wheels.
1—**Mead-Morrison** 4½x6 **Steam Swinger.**

HARRY C. LEWIS
156 Market St., Newark, N. J.
Phone: Mitchell 3678

BOILERS
AT BARGAIN PRICES

Horizontal Return Tubular

3—234 Hp. A.S.M.E. 84 in.x20 ft. 0 in. 135 to 150 lbs. pressure.
2—194 Hp. A.S.M.E. 78 in.x20 ft. 0 in. 145 lbs. pressure.
1—150 Hp. A.S.ME. 72 in.x18 ft. 0 in. 150 lbs. pressure.
1—125 Hp. 66 in.x18 ft. 0 in. 125 lbs. pressure.

Water Tube

2—264 Hp. B&W with stokers—150 lbs. pressure.
1—250 Hp. Altman & Taylor—150 lbs. pressure.
1—250 Hp. Heine—150 lbs. pressure.
1—235 Hp. Heine (oil burner)—125 lbs. pressure.
Priced low for disposition before removal.

HENRY A. HITNER'S SONS CO.
4501 Richmond St., Philadelphia, Penna.

Let Us **STORE** Your Equipment

We are now repairing for the owners
Erie Shovel 2648
Browning Crane 1244

Let Us **REPAIR** Your Equipment

SNYDER ENGINEERING CO., LINCOLN, N. J.
Telephone: **Bound Brook 437**

WE BUY--SELL--TRADE--RENT CONSTRUCTION EQUIPMENT

CRANES & DRAGLINES

Browning 8-C Std. Ga. used 4 mos.
O & S 30-Ton Std. Ga. rebuilt.
Browning Std. Ga. 4-Whl.
Erie "B" Cat. Shovel Attach.
Marion 21 Cat. Dragline Attach.
O & S 12-Ton Cat. Gas & Steam.
O & S Cat. 5-Ton Gas.
Link-Belt Cat. Gas 50-ft. Boom.
P & H 206 Cat. Gas. Clam & Dragline.
Bucyrus Class 24 Steam Power.
Monighan 1-T Walker Gas Power.
Bucyrus Class 14 Steam.
Browning No. 5 Std. Ga. used 10 mos.
Brown Hoist Std. Ga. 50 ft. boom, 20 ton.
Northwest 104 Dragline and Shovel attach.

HOISTING ENGINES

10—7x10 and 8¼x10, 2 and 3 Drum.
Large selection of Steam, Electric and Gas 10 to 100 Hp., 2 and 3 Drum.
Novo D/D with attached Swinging Gear, with 40-hp., 4-cyl. Gas. Eng.

SHOVELS

Marion 21 Cat. 1 yd.
Erie "B" Cat. with Crane Attach.
Bucyrus 50-B Cat. Steam.
Northwest—Models 104 and 105.
P&H No. 206 Cat. Gas.
15 Railroad and Stripping Type from 1 to 6-yd. cap.
7 Bucyrus & Marion Cat. 1 and 3½-yd. cap.
Type "O" Thew cat. with crane attach.
Byers Bear Cat.

BUCKETS

30 to 35 cu. ft. Cont. Bottom Dump.
8 Clams various makes ½ to 1½-yd. cap.

LOCOMOTIVES

Burton 6 ton, 24 in. Ga. Gas.
20 various makes 24, 36 and Std. Ga. Steam, Gas, Elec. 3 to 75 Tons.

MISCELLANEOUS

Novo Cent. Pump 8x6 Gas Power.
Aldrich Triplex 15 Hp. LeRoi Motor.
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Milwaukee Corrugating Co.
National Steel Fabric Co
Northwestern Expanded Metal Co.
Peelle Company, The
Truscon Steel Co.

Floor Hardener, Concrete
(See Concrete Floor Hardener)

Floors, Asphalt Blocks
Hastings Pavement Co.
Standard Oil Co. of N. Y.

Floors, Asphalt Mastic
Standard Oil Co. of N. Y.

Flooring, Fireproof
Hendrick Mfg. Co.
Irving Iron Works Co.
Kerlow Steel Flooring Co
National Steel Fabric Co.
Structural Gypsum Co.
Tri-Lok Co.

Floor, Wood Block
Jennison-Wright Co.
Southern Wood Preserv. Co.

Flumes
American Wood Pipe Co.

Flumes, Iron and Steel
Blaw-Knox Co.
Hardesty Mfg. Co., The R

Forgings
Bethlehem Steel Co.

Form Clamps
Insley Manufacturing Co.
Universal Form Clamp Co.

Form Tighteners
Marion Malleable Ir. Wks.

Forms—Culvert, Road, Sewer, Tunnel, Etc.
Blaw-Knox Co.
Foote Co., Inc.
Heltzel Steel Form & Iron

Forms, Curb and Gutter
Blaw-Knox Co.
Heltzel Steel Form & Iron

Forms for Walls, Building Construction, Etc.
Blaw-Knox Co.
Heltzel Steel Form & Iron

Foundations
Atwell Co., Inc., Geo. J.
MacArthur Conc. Pile & Foundation Co.
Post & McCord, Inc.
Raymond Concrete Pile Co.
Simplex Conc. Pile Assn.
Spencer, White & Prentis

Frogs and Switches, Railway
Bethlehem Steel Co.
Ramapo Ajax Corp.
Sweets Steel Co.

Furnaces, Annealing & Tempering
American Bridge Co.

Garbage Disposal Apparatus
Jeffrey Mfg. Co.

Gas Holders
Chicago Bridge & Ir. Wks

Gas Producers
Blaw-Knox Co.

Gates, Sluice
Coffin Valve Co.
Coldwell Wilcox Co.
Dayton Globe Iron Works
Hardesty Mfg. Co., The R

Gauges, Loss of Head
Simplex Valve & Meter Co.

Gauges, Rate of Flow
Simplex Valve & Meter Co.

Gauges, Recording Pressure and Vacuum
Bristol Co.

Gauges, Water Level
Bristol Co.

Gears
Earle Gear & Mach. Co.
Jeffrey Mfg. Co.
Link-Belt Co.
Vulcan Iron Wks. of Pa.

Gears, Worm Reduction
Earle Gear & Mch. Co.
De Laval Steam Turbine Co

Generators, Acetylene
Oxweld Acetylene Co.

Generators, Electric
Allis-Chalmers Mfg. Co.

Glass, Fireproof
(See Wire Glass)

Governors, Waterwheel
Woodward Governor Co.

Graders
Western Wheel Scraper Co.

Graders, Road
Erie Steam Shovel Co.
Smith Co., T. L.
Thew Shovel Co.
Western Wheeled Scraper Co.

Granite
Granite Paving Brick Mfgrs. Assn.

Gratings, Flooring
Blaw-Knox Co.
Tri-Lok Co.

Gratings, Safety
Blaw-Knox Co.
Hendrick Mfg. Co.
Irving Iron Works Co.
Kerlow Steel Flooring Co.
Tri-Lok Co.

Gravel-Washing Plants
Jeffrey Mfg. Co.
Link-Belt Co.
Sauerman Bros.

Grills
Blaw-Knox Co.
Tri-lok Co.

Grinders, Air and Electric
Chicago Pneu. Tool Co.

Grouting
Weber Eng'r'g Co.

Hammers, Pneumatic
Chicago Pneu. Tool Co.

Hammers, Steam, Pile
(See Pile Hammers, Steam)

Heaters, Tar & Asphalt
Connery & Company
Littleford Bros.

Heating, System
Grinnell Company

Hoists, Concrete, Tower
Insley Manufacturing Co.
Lakewood Engineering Co.
Lidgerwood Mfg. Co.
National Hoisting Eng. Co
Ransome Concrete Machy. Co.

Hoists, Contractors'—Electric
Allis-Chalmers Mfg. Co.
Bay City Dredge Works
Byers Machine Co.
Dobbie Fdry. & Mach. Co.
Flory Mfg. Co., S.
Lidgerwood Mfg. Co.
Monighan Machine Co.
Mundy Sales Corp., The
National Hoisting Eng. Co
Orr & Sembower, Inc.
Vulcan Iron Wks. of Pa.

Hoists, Contractors'—Gasoline
Flory Mfg. Co.
Harnischfeger Corp.
Lidgerwood Mfg. Co.
Metalweld Service Corp.
Mundy Sales Corp., The
National Hoisting Eng. Co.
Vulcan Iron Wks. of Pa.

Hoists, Contractors' Steam
Allis-Chalmers Mfg. Co.
Byers Machine Co.
Ingersoll-Rand Co.
Lidgerwood Mfg. Co.
Mundy Sales Corp., The
National Hoisting Eng. Co.
Orr & Sembower, Inc.
Vulcan Iron Wks. of Pa.

Hoists, Gates
Dayton Globe Iron Works

Hoists, Material Tower
Lakewood Engineering Co.

Hoists, Motor Truck
Atlas Corporation
Mead-Morrison Mfg. Co.

Hoists, Pneumatic
Chicago Pneumatic Tool Co.
Ingersoll-Rand Co.
Sullivan Machinery Co.

Hoists, Skip
Link-Belt Co.
Nelson Iron Works, N. P.

Hoists, Steam, Air, Water
Chicago Pneumatic Tool

Hoppers, Concrete
Insley Mfg. Co.
Lakewood Engineering Co.
Ransome Concrete Machy. Co.

Hoppers, Steel
Blaw-Knox Co.
Erie Steel Constr. Co.
Heltzel Steel Form & Iron
Littleford Bros.

Hydrants
Kennedy Valve Mfg. Co.
Ludlow Valve Mfg. Co.
Michigan Valve & Fdy. Co.
Smith Mfg., A. P.
Vogt Bros. Mfg. Co.
Wood & Co., R. D.

Hydraulic Giants
American Spiral Pipe Wks.

Inserts, Concrete
Concrete Steel Co.
Kalman Steel Co.

Instruments, Drawing
Keuffel & Esser Co.

Instruments, Surveying
Ainsworth & Sons, Wm.
Berger & Sons, C. L.
Brandlis & Son
Buff & Buff Mfg. Co.
Gurley, W. & L. E.
Keuffel & Esser Co.

Indicators for Constant Concrete
Blaw-Knox Co.

Iron Work, Structural and Ornamental
Irving Iron Works Co.
Snead Arch. Iron Wks.
Tri-Lok Co.

Jacks, Lifting
Duff Mfg. Co.
McKiernan Terry Drill Co.

Jacks, Pipe Forcing
Duff Mfg. Co.

Jacks, Track
Duff Mfg. Co.

Joints, Expansion, Paving
Carey Co., Philip

Joints, Filler Paving
Standard Oil Co. of N. Y.

Joints, Flexible Pipe
Central Foundry Co.
U. S. Cast Iron Pipe & Foundry Co.

Kilns, Rotary and Vertical
Vulcan Iron Wks. of Pa.

Ladder Steps, Steel
Hendricks Mfg. Co.
Irving Iron Works Co.
Tri-Lok Co.

Lath, Expanded Metal
Concrete Steel Co.
Consolidated Expanded Metal Co.
Kalman Steel Co.
Milwaukee Corrugating Co.
National Steel Fabric Co.
Northwestern Expanded Metal Co.
Ryerson & Son, Inc.

Lead Burning Apparatus
Oxweld Acetyline Co.

Leadite
Leadite Co., Inc., The

Lettering Guides
Keuffel & Esser Co.

Lights Contractors
Carbic Manufacturing Co.

Loaders, Car & Wagon
Austin Mchy. Corp.
Barber-Greene Co.
Erie Steam Shovel Co.
Haiss Mfg. Co., Geo.
Jeffrey Mfg. Co.
Link-Belt Co.
Nelson Iron Works, N. P.

Loaders, Portable
Haiss Mfg. Co., Geo.
Jeffrey Mfg. Co.

Locomotives, Electric
Jeffrey Mfg. Co.
Vulcan Iron Wks. of Pa.

Locomotives, Gasoline
Fate-Root-Heath Co.
Vulcan Iron Wks. of Pa.
Whitecomb, Geo. D.

Locomotives, Steam
Koppel Indust. Car & Equip. Co.
Vulcan Iron Wks. of Pa.

Locomotives, Storage Battery
Jeffrey Mfg. Co.
Vulcan Iron Wks. of Pa.
Whitcomb, Geo. D.

Long Distance Systems
Bristol Co.

Lumber
Eppinger & Russell Co.

Machinery, Paver
Chain-Belt Co.

Magnetos
Eisemann Magneto Corp.

Manhole Covers
Central Foundry Co.

Manometers
Simplex Valve & Meter Co.

Meter Provers
Hersey Mfg. Co.

Meters, Boiler Feed Water
Builders Iron Fdy.

Meters, Current
Gurley, W. & L. E.

Meters, Gas and Steam
Builders Iron Fdy.

Meters, Water and Oil
Builders Iron Fdy.
Gamon Meter Co.
Hersey Mfg. Co.
Simplex Valve & Meter Co.
Union Water Meter Co.
Worthington Pump & Mchy. Corp.

Mixers, Concrete
Austin Mchy. Co.
Cement-Gun Co.
Chain Belt Co.
Foote Co., Inc.
Koehring Company
Lakewood Engr. Co.
Orr & Sembower, Inc.
Ransome Concrete Machy. Co.
Smith Co., T. L.

Mixers, Grout
Austin Mchy. Corp.
Ransome Concrete Machy. Co.
Smith Co., T. L.
Union Iron Works

Mixers, Hot
Austin Mchy. Corp.

Mixers, Mortar
Austin Mchy. Corp.
Ransome Concrete Machy. Co.

Mixers, Paving
Austin Mchy. Corp.
Chain Belt Co
Foote Co., Inc.
Koehring Company
Ransome Concrete Machy Co.
Smith Co., T. L.

Mixers, Pneumatic
Ransome Concrete Machy. Co.

Motors, Electric
Allis-Chalmers Mfg. Co.

Motors, Gasoline
Hercules Motors Corp.
Waukesha Motor Co.

Motor Trucks
(See Trucks, Motor)

Oxy Acetylene Apparatus
Oxweld Acetylene Co.

Packing
Jenkins Bros.

Paints, Graphite
Truscon Laboratories

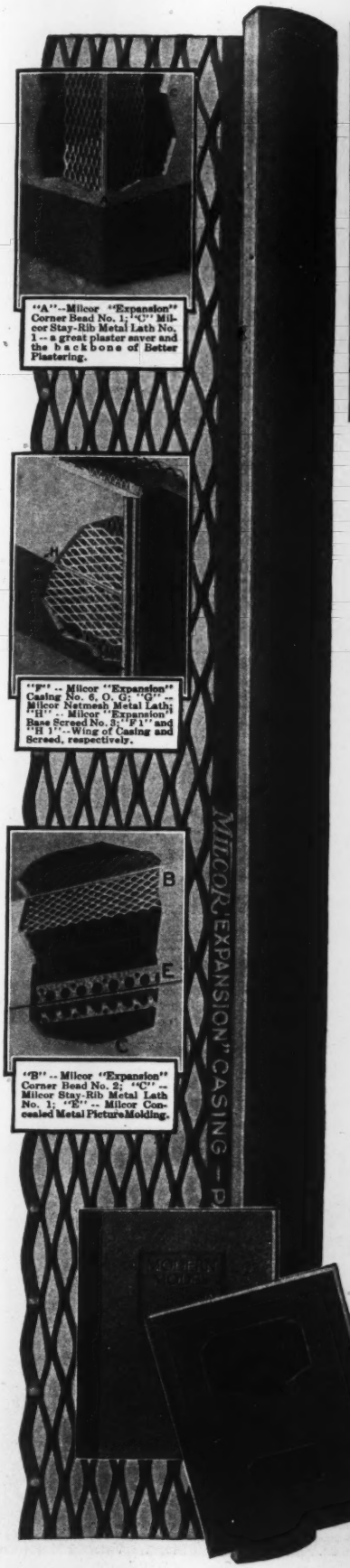
Paints, Light Reflecting
Truscon Laboratories

Paints, Metal Protective
Carey Co., Philip
Protexol Corp.
Truscon Laboratories
Wailes-Dove-Hermiston Corp.

Pavement Breakers
Buckeye Tr. Ditcher Co.
Chicago Pneu. Tool Co.
Cleveland Rock Drill Co.
Ingersoll-Rand Co.

Paving, Asphalt
Carey Co., Philip
Standard Oil Co. of N. Y.

Paving, Asphalt Mastic
Standard Oil Co. of N. Y.


"A"--Milcor "Expansion" Corner Bead No. 1; "C" Milcor Stay-Rib Metal Lath No. 1--a great plaster saver and the backbone of Better Plastering.
"F"--Milcor "Expansion" Casing No. 6, O. G; "C"--Milcor Netmesh Metal Lath; "H"--Milcor "Expansion" Base Screed No. 5; "F 1" and "H 1"--Wing of Casing and Screed, respectively.
"B"--Milcor "Expansion" Corner Bead No. 2; "C"--Milcor Stay-Rib Metal Lath No. 1; "E"--Milcor Concealed Metal Picture Molding.
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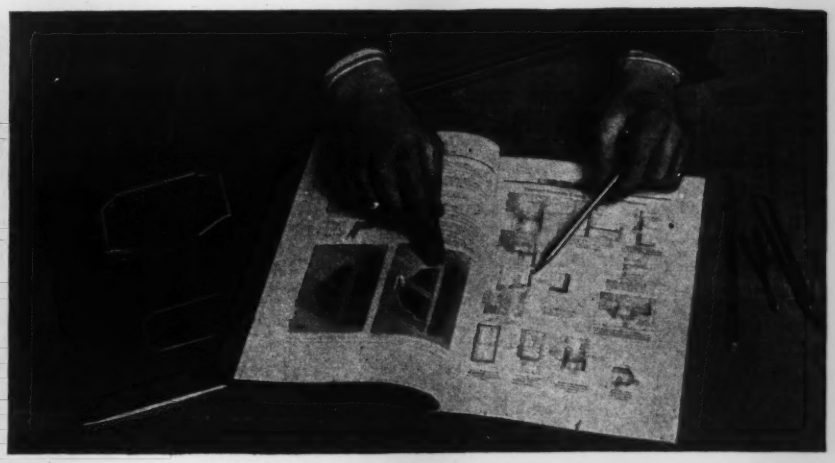

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Milcor "Expansion" Metal Casings eliminate expensive wooden door and window trim, improve appearance of rooms, are more sanitary, firesafe and economical.

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Member of National Council for Better Plastering

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Member of Associated Metal Lath Manufacturers

MILWAUKEE CORRUGATING COMPANY, *Milwaukee, Wisconsin*
Chicago, Ill. Kansas City, Mo. La Crosse, Wis.

MILCOR

Metal Lath and Roofing in Steel, Zinc, Copper and

ARMCO Ingot Iron

MILWAUKEE CORRUGATING CO., Milwaukee, Wisconsin
Please send "Modern Modes in Better Plastering" and "The Milcor Manual", without cost or obligation.

Name..... Address.....

Paving Blocks, Asphalt
Hastings Pavement Co.

Paving Blocks, Creosoted Wood
(See Creosoted Blocks, Timber, Poles, Cross-Arms, Lumber, etc.)

Paving Blocks, Granite
Granite Paving Block Mfrs. Assn.

Paving, Cold Patching
Standard Oil Co. of N. Y.

Paving Tools
Littleford Bros.

Penstocks
Blaw-Knox Co.
Connery & Company
Chicago Bridge & Iron Wks
Penstock Constr. Co.
Petroleum Iron Wks.

Pile-Drivers
Browning Crane Co., The
Harnischfeger Corp.
McKiernan Terry Drill Co.
McMyler Interstate Co.
Orton Crane & Shovel Co.
Union Iron Works

Pile Hammers, Steam
McKiernan Terry Drill Co.
National Hoisting Eng. Co.
Union Iron Works
Vulcan Iron Wks. (Chic.)

Piles, Concrete
MacArthur Conc. Pile & Foundation Co.
Newark Concrete Pipe Co.
Raymond Concrete Pile Co.
Simplex Conc. Pile Assn.
Spencer, White & Prentis

Piles, Creosoted, Wood
Jennison-Wright Co.

Piling, Interlocking Steel
Bethlehem Steel Co.
Carnegie Steel Co.

Pipe, Bends
East Jersey Pipe Co.

Pipe, Cast-Iron
Amer. Cast Iron Pipe Co.
Central Foundry Co.
Clow & Sons, James B.
Fox & Co., John
Glamorgan Pipe & Fdry.
McWane Cast Iron Pipe Co.
Nat'l Cast Iron Pipe Co.
U. S. Cast Iron Pipe & Fdry. Co.
Wood & Co., R. D.

Pipe, Cement-Lined
Cement Lined Pipe Co.

Pipe, Concrete
Independent Concrete Pipe Co.
Lock Joint Pipe Co.

Pipe, Corrugated
Austin Western Road Mchry. Co.
Canton Culvert & Silo Co.
Hardesty Mfg. Co., The R.

Pipe Covering, Asbestos
Carey Co., Philip

Pipe Covering, Wood
Michigan Pipe Co., The
Standard Wood Pipe Co.
Wyckoff & Son Co., A.

Pipe Fittings
Builders Iron Fdy.
Central Foundry Co.
U. S. Cast Iron Pipe and Foundry Co.

Pipe Flanges, Forged Steel
American Spiral Pipe Wks.

Pipe, Forge Welded
American Spiral Pipe Wks.

Pipe Joint Compounds
Hydraulic Development Co.
Leadite Co., Inc., The

Pipe, Lock Bar
East Jersey Pipe Co.

Pipe, Lock Joint
Lock Joint Pipe Co.

Pipe, Reinforced Concrete
Independent Concrete Pipe Co.
Lock Joint Pipe Co.
Newark Concrete Pipe Co.

Pipe, Riveted Steel
Blaw-Knox Co.
Connery & Company
East Jersey Pipe Co.
McNeil & Bro. Co.
Petroleum Iron Works Co.
Tippett & Wood

Pipe, Sewer
La Clede Christy Clay Prod. Co.

Pipe Shoes
Marion Malleable Iron Wks.

Pipe, Spiral
Abendroth & Root Mfg. Co.
American Spiral Pipe Co.
Blaw-Knox Co.

Pipe, Wood
American Wood Pipe Co.
Michigan Pipe Co.
Standard Wood Pipe Co.
Wyckoff & Son Co., A.

Plaster Reinforcing
Consolidated Expanded Metal Co.
National Steel Fabric Co.

Poles, Steel Structural
Blaw-Knox Co.

Power Units, Gasoline
Climax Engr. Co.
Waukesha Motor Co.

Pressed Steel Products
Blaw-Knox Co.
Kalman Steel Co.

Pumps, Air-Lift
Chicago Pneu. Tool Co.
Ingersoll-Rand Co. (Cameron Steam Pump Wks. A. S.)
Sullivan Machinery Co.
Worthington Pump & Mchy. Corp.

Pumps, Boiler-Feed, Steam
Ingersoll-Rand Co. (Cameron Steam Pump Wks. A. S.)
Sullivan Machinery Co.
Vogt Bros. Mfg. Co.

Pumps, Centrifugal and Multi-Stage High Lift
American Well Works
Buffalo Steam Pump Co.
De Laval Steam Turbine Co.
Erie Pump & Engine Co.
Goulds Pumps, Inc.
Ingersoll-Rand Co. (Cameron Steam Pump Wks. A. S.)
Lawrence Pump & Eng. Co.
LeCourtenay Co.
Manistee Iron Works
Morris Machine Works
Smith Co., T. L.
Worthington Pump & Mchy. Corp.

Pumps, Contractors
Ingersoll-Rand Co. (Cameron Steam Pump Wks. A. S.)
Parker, A. A.
Pulsometer Steam Pump
Smith Co., T. L.
Worthington Pump & Mchy Corp.

Pumps, Deep Well
American Well Works
Manistee Iron Works
Smith Co., T. L.

Pumps, Dredging and Sand
Ellicott Machine Corp.
Lawrence Pump & Eng. Co.
Morris Machine Works
Norborn Engineering Co.
Parker, A. A.
Worthington Pump & Mchy. Corp.

Pumps, Power
American Well Works
Buffalo Steam Pump Co.
Goulds Pumps, Inc.
Lecourtenay Co.
Sterling Engine Co.
Worthington Pump & Mchy. Corp.

Pumps, Underwriters Centrifugal
Allis-Chalmers Mfg. Co.
American Well Works
Erie Gear & Machine Co.
Sterling Engine Co.
Worthington Pump & Mchy. Corp.

Pumps, Waterworks
Worthington Pump & Mchy. Corp.

Purifiers, Feed-Water
Norwood Engineering Co.

Pyrometers
Bristol Co.
Taylor Instrument Co.

Rail and Rail Joints, Fastening and Specialties
Bethlehem Steel Co.
Carnegie Steel Co.
Sweets Steel Co.

Rails, Relaying
(See Searchlight)

Railroad Ditchers
Erie Steam Shovel Co.
Harnischfeger Corp.

Recorders, Motion and Time
Bristol Co.

Recorders, Water Stage
Bristol Co.
Gurley, W. & L. E.

Refractories
La Clede Christy Clay Prod. Co.

Regulators Compressed, Air
Oxweld Acetylene Co.

Reinforcing, Bar Coupling
Concrete Steel Co.
Marion Malleable Iron Wks.

Reinforcing, Concrete
(See Concrete Reinforcement)

Reinforcing Metal for Concrete Work
Blaw-Knox Co.
Concrete Steel Co.
Consolidated Expanded Metal Co.
Hetzel Steel Form & Ir.
Kalman Steel Co.
Northwestern Expanded Metal Co.
Ryerson & Son, Inc.

Retaining Walls, Precast
R. C. Products Co.

Rivet Busters and Sets
Chicago Pneu. Tool Co.

Riveting Machines
Allen Co., John F.
Chicago Pneu. Tool Co.

Road Finishers, Concrete
Austin Mchy. Corp.
Lakewood Engineering Co.

Road Oils and Preservatives
Standard Oil Co. of N. Y.

Road Oilers, Pressere
Austin-Western Road Mchry. Co.

Road Rollers, Gasoline and Steam
Acme Road Mchy. Co
Austin Western Road Mchry. Co.
Buffalo-Springfield Roller

Rolls, Crushing
Allis-Chalmers Mfg. Co.
Jeffrey Mfg. Co.

Roofing, Metal
Milwaukee Corrugating Co.
Ryerson & Son, Joseph T.

Roofing, Prepared
Carey Co., Philip

Roofing, Tile
American Cement Tile Manufacturing Co.
Milwaukee Corrugating Co.
Truscon Laboratories

Rope, Wire-Transmision, Hoisting and Haulage
American Steel & Wire Co.
Leschen & Sons Rope Co.
Roebling Sons Co., John A.

Sash, Steel, Window
(See Window Sash)

Schools & Colleges
(See Directory of Engineers)

Scrapers, Scarifiers, Plows, etc.
Austin Western Road Mchry. Co.
Western Wheeled Scraper Co.

Screens, Revolving
Austin Western Road Mchry. Co.

Screens, Sand, Gravel and Coal
Austin Western Road Mchry. Co.
Chain Belt Co.
Haiss Mfg. Co., Geo.
Hendrick Mfg. Co.
Link-Belt Co.

Screens, Water Intake
Chain Belt Co.
Link-Belt Co.

Second Hand Equipment
(See Searchlight Section)

Sewage Disposal Apparatus
Dorr Company

Sewer, Segment Blocks
La Clede Christy Clay Prod. Co.

Sharpening Machines, Drill Bit
Ingersoll-Rand Co.
Sullivan Machinery Co.

Sheaves
Haiss Mfg. Co., Geo.

Sheets, Iron & Steel
Bethlehem Steel Co.
Milwaukee Corrugating Co.
Ryerson & Son, Inc.

Sheets, Roofing and Siding
Milwaukee Corrugating Co.
Ryerson & Son, Inc.

Shores, Adjustable
Universal Form Clamp Co.

Shovels and Pile Driver Attachments
Browning Crane Co.

Shovels, Diesel
Bucyrus Company
Harnischfeger Corp.
Northwest Engr. Co.

Shovels, Electric
Bucyrus Company
Erie Steam Shovel Co.
Harnischfeger Corp.
Northwest Engr. Co.
Thew Shovel Co.

Shovels, Gasoline
Austin Machinery Corp.
Brown Hoisting Machy. Co.
Bucyrus Company
Harnischfeger Corp.
Koehring Company
McMyler Interstate Co.
Northwest Engr. Co.
Orton Crane & Shovel Co.
Thew Shovel Co.

Shovels, Steam
Austin Machinery Corp.
Bucyrus Company
Erie Steam Shovel Co.
Harnischfeger Corp.
McMyler Interstate Co.
Northwest Engr. Co.
Orton Crane & Shovel Co.
Osgood Co., The
Russell & Company
Thew Shovel Co.

Skips, Stone
Insley Manufacturing Co.
Lakewood Engineering Co.

Slabs, Concrete Roofing
American Cement Tile Manufacturing Co.

Slag
Carnegie Steel Co.

Spreaders, Ballast
Bucyrus Company

Sprinklers & Sweepers, Street
Austin Machinery Corp.
Austin Western Road Mchry. Co.

Standpipes
Blaw-Knox Co.
Chicago Bridge & Iron Wks.
Connery & Company
Pitts.-Des Moines Steel Co.
Tippett & Wood

Steam Specialists
Jenkins Bros.

Steel
Central Alloy Steel Corp.
Rail Steel Bar Assn.
Ryerson & Son, Joseph T.

Steel Plate Construction
Bethlehem Steel Co.
Blaw-Knox Co.
Chicago Bridge & Iron Wks.
Connery & Company
East Jersey Pipe Co.
Graver Corp.
Heltzel Steel Form & Ir. Co.
Littleford Bros.
National Steel Fabric Co.
Nelson Iron Works, N. P.
Penstock Constru. Co.
Petroleum Iron Wks. Co.
Pitts.-Des Moines Steel Co.
Riter-Conley Co.
Union Iron Works
Walsh & Weidner Boiler Co.

Steel Rock Drills
Ingersoll-Rand Co.

Steel, Structural
American Bridge Co.
Belmont Iron Works
Berlin Construction Co
Bethlehem Steel Co.
Blaw-Knox Co.
Boston Bridge Works
Carnegie Steel Co.
Converse Bridge & Steel Co.
Eastern Bridge & Structural Co.
Fort Pitt Bridge Works
McClintic-Marshall Co.
Milwaukee Bridge Co.
Minn. Steel & Mchy. Co.
Mount Vernon Bridge Co.
Phoenix Bridge Co.
Pitts.-Des Moines Steel Co.
Rail Steel Bar Assn.
Shoemaker Bridge Co.
Snare Corp., Frd'k.
Snead Arch. Iron Works
Virginia Bridge & Iron Co.
Wis. Bridge & Iron Co.

Steel, Tool
Bethlehem Steel Co.
Carnegie Steel Co.

Stirrups, Continuous Reinforcing Unit
Kalman Steel Co.
Ryerson & Son, Inc.

Stokers
Babcock & Wilcox Co.

Subgraders
Lakewood Engineering Co.

Superheaters
Babcock & Wilcox Co.

Tables & Boards, Drawing
Dietzgen Co., Eugene
Hamilton Mfg. Co.

Tackle Blocks
Patterson Co., W. W.

Tanks, Air Compressor
Chicago Pneu. Tool Co.
East Jersey Pipe Co.

Tanks, Elevated Steel
Chicago Bridge & Iron Wks.
Graver Corp.
Pitts.-Des Moines Steel Co.

Tanks, Oil Storage
American Bridge Co.
Blaw-Knox Co.
Chicago Bridge & Iron Wks.
Penstock Constru. Co.
Petroleum Iron Works
Riter-Conley Co.

Tanks, Welded and Riveted
Graver Corp.
Littleford Bros.

Tapes, Steel and Metallic
Dietzgen Co., Eugene
Hamilton Mfg. Co.
Keuffel & Esser Co.
Lufkin Rule Co.

Tarpaulins and Tents
Kunkley of New York

Thawing Outfits
Huck Mfg. Company

Thermometers
Taylor Instrument Cos.

Ties, Creosoted Wood
Jennison-Wright Co.

Ties, Steel
Carnegie Steel Co.

Tile, Concrete Building
Amer. Cement Tile Mfg. Co.
Truscon Laboratories

Tile, Roof Cement
Amer. Cement Tile Mfg. Co.
Truscon Laboratories

Tin, Metal
Milwaukee Corrugating Co.

Tin Plate
Bethlehem Steel Co.
Milwaukee Corrugating Co.

Tools, Electric
Chicago Pneu. Tool Co.

Tools, Pneumatic
Chicago Pneu. Tool Co.
Ingersoll-Rand Co.
Metalweld Service Corp.

Towers, Radio
Blaw-Knox Co.

Towers, Transmission
American Bridge Co.
Moran Construction Co.

Track, Industrial and Portable
Bethlehem Steel Co.
Carnegie Steel Co.
Koppel Indust. Car & Equip. Co.
Lakewood Engineering Co.
Ryerson & Son, Inc.
Sweets Steel Co.

Traction, Crawling Type
Buckeye Tr. Ditcher Co.

Tractors
Cleveland Tractor Co.
Haiss Mfg. Co., Geo.
Minn. Steel & Mchy. Co.
Seabrook Co., C. F.

Tramways, Aerial Springs
Rex Watson Corp.

Tramways, Overhead
Harnischfeger Corp.

Transits and Levels
Ainsworth & Sons, Wm.
Berger & Sons, C. L.
Brandis & Son
Buff & Buff Mfg. Co.
Gurley, W. & L. E.

Transmission Mchy. Power
Chain Belt Co.
Link-Belt Co.

Treads, Safety
Concrete Steel Co.
Hendrick Mfg. Co.
Irving Iron Works Co.
Kerlow Steel Flooring Co.
Tri-lok Co.

Treads, Stair, Non-Slipping
Blaw-Knox Co.
Hendrick Mfg. Co.
Ryerson & Son, Inc.
Tri-Lok Co.

Trench Braces
Duff Mfg. Co.

Trolley I-Beam
Brown Hoisting Mchy. Co.

Trucks, Garbage
Atia Corporation

Trucks, Motor
Cleveland Tractor Co.
Rex Watson Corp.

Tunnel Liner Plates
Blaw-Knox Co.

Turbines, Hydraulic Impulse and Reaction
Allis-Chalmers Mfg. Co.
Worthington Pump & Mchy. Corp.

Turbines, Steam
Allis-Chalmers Mfg. Co.
De Laval Steam Turbine Co.

Turntables
American Bridge Co.
Blaw-Knox Co.

Underpinning
Spencer White & Prentis

Unloaders, Car & Wagon
Erie Steam Shovel Co.
Haiss Mfg. Co., Geo.
Heltzel Steel Form & Ir. Co.
Jeffrey Mfg. Co.
Link-Belt Co.
Nelson Iron Works, N. P.

Valves, Air, Water, Steam and Gas
Coffin Valve Co.
Kennedy Valve Mfg. Co.
Ludlow Valve Mfg. Co.
Michigan Valve & Fdy. Co.
Norwood Engineering Co.
Simplex Valve & Meter Co.
Smith Mfg. Co., A. P.
Vogt Bros. Mfg. Co.

Valves, Altitude
Ludloy Valve Mfg. Co.

Valves, Angle, Check, Gate and Globe
Coffin Valve Co.
Jenkins Bros.
Ludlow Valve Mfg. Co.
Michigan Valve & Fdy. Co.
Simplex Valve & Meter Co.

Scene on our Open Hearth Charging Floor

Alloy Steel Makers—*and More*

IF OUR interest in selling you steel was confined to taking your order, delivering and collecting, we would fall far short of proving ourselves worthy of the trust that is placed in us as leaders in the world's production of Alloy Steel. We maintain a large staff of expert metallurgists whose duty it is to delve into any steel problem you have and solve it for you without charge, regardless of whether your name appears on our books. If you want further guidance in the treatment of Agathon Alloy Steels after machining, we will also render this assistance gratis. We are alloy steel makers—and more. For we realize your success is our success. Want a copy of our handbook?

We have daily production in all kinds of Agathon Alloy Steels such as—

Nickel, Chrome-Nickel, UMA, Molybdenum, Chrome-Molybdenum, Nickel - Molybdenum, Vanadium, Chrome-Vanadium, Chromium, etc.

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The Central Alloy Steel Corp., Massillon, Ohio

Cleveland Detroit Chicago New York Syracuse Philadelphia
St. Louis Los Angeles Tulsa Cincinnati

AGATHON ALLOY STEELS

ALPHABETICAL INDEX TO ADVERTISERS

This index is published as a convenience to the reader. Every care is taken to make it accurate, but *Engineering News-Record* assumes no responsibility for errors or omissions.

	Page
Abendroth & Root Mfg. Co.	96
Acme Rd. Mchry. Co.	72
Ainsworth & Sons, Wm.	108
Airmap Corp'n of Amer.	108
Allen Co., John F.	106
Allis-Chalmers Mfg. Co.	26
Ambursen Construction Co.	82
American Bridge Co.	106
American Casting Co.	73
American Cast Iron Pipe Co.	94
American Cement Tile Mfg. Co.	75
American Chimney Corp.	102
American Creosote Works, Inc.	74
American Spiral Pipe Works	96
American Steel & Wire Co.	89
American Terry Derrick Co.	86
American Water Softener Co.	93
American Well Works	99
American Wood Pipe Co.	96
Anderson Engine & Foundry Co.	100
Anti-Hydro Waterproofing Co.	80
Arnold Hoffman & Co., Inc.	93
Atia Corporation	71
Atwell Co., Inc., Geo. J.	84
Austin Mchry. Corp.	13
Austin-Western Road Machy. Co.	16
Babcock & Wilcox Co.	103
Ballard Sprague & Co.	102
Barber-Greene Co.	72
Barney Ahlers Construction Co.	14
Bay City Dredge Works	86
Belmont Iron Works	104
Berger & Sons, C. L.	108
Berlin Construction Co.	106
Bethlehem Steel Co.	104
Blaw-Knox Co. (Insert 27-28)	88-104
Boston Bridge Works, Inc.	106
Brandis & Sons	108
Bristol Co.	93
Brown Hoisting Machy. Co.	46
Browning Crane Co., The	86
Buckeye Tr. Ditcher Co.	86
Bucyrus Company	85-88
Buff & Buff Mfg. Co.	107
Buffalo-Springfield Roller Co.	72
Buffalo Steam Pump Co.	100
Buhl Company	84
Builders Iron Fdy.	90
Byers Machine Co.	Insert 37-38
Cameron Steam Pump Works A. S. (Ingersoll-Rand Co.)	54
Canton, Culvert & Silo Co.	73
Carbic Mfg. Co.	100
Carey Co., Philip	44
Carnegie Steel Co.	104
Cement-Gun Co., Inc.	79
Cement-Gun Construction Co.	82
Cement Lined Pipe Co.	94
Central Alloy Steel Corp.	135
Central Foundry Co.	94
Chain Belt Co.	42
Chapman & Co., Inc., P. W.	90
Chicago Bridge & Iron Works	23
Chicago Pneumatic Tool Co.	85
Clay Products Ass'n.	73
Cleveland Rock Drill Co.	85
Climax Engineering Co.	74
Clow & Sons, James B.	92
Coffin Valve Co.	90
Coldwell-Wilcox Co.	90
Concrete Steel Co.	6, 21-78
Connery & Co., The	103
Consolidated Expanded Metal Companies	75
Converse Bridge & Steel Co.	106
Custodis Chimney Constr. Co.	102
Dayton Globe Iron Works	90
De Laval Steam Turbine Co.	98
Dietzgen Co., Eugene	108
Dobbie Fdy. & Mach. Co.	88
Dorr Company	40
Duff Mfg. Co.	73
Earle Gear & Mach. Co.	104
Eastern Bridge & Structural Co.	106
East Jersey Pipe Co.	94
Eisemann Magneto Corp.	78
Electro Bleaching Gas Co.	93
Ellicott Machine Corp.	80
Engineers' Directory	110
Engrg. Schools and Colleges	111
Eppinger & Russell Co.	74
Erie Pump & Engine Works	100
Erie Steam Shovel Co.	8-9
Erie Steel Constr. Co.	88
Fairchild Aerial Surveys	108
Fate-Root-Heath Co.	70
Flory Mfg. Co., S.	88
Foos Gas Engine Co.	101
Foote Company	24-25
For Rent Ads.	120
For Sale Ads.	121
Fort Pitt Bridge Works	105
Fox & Co., John	92
Gamon Meter Co.	90
General Concrete Constr. Co.	102
Giles Drilling Co.	82
Glamorgan Pipe & Fdy. Co.	94
Goulds Pumps, Inc.	100
Granite Pav. Block Mfgrs. Ass'n.	72
Graver Corporation	92
Grinnell Company	4th Cover
Gunite Concrete & Constr. Co.	82
Gurley, W. & L. E.	107
Haiss Mfg. Co., Inc., Geo.	72-88
Hamilton Mfg. Co.	108
Hardesty Mfg. Co., R.	73
Harnischfeger Corp.	39
Hastings Pavement Co.	72
Hauck Mfg. Company	80
Hayward Company	88
Heine Chimney Company	102
Heltzel Steel Form & Iron Co.	70
Hendrick Mfg. Co.	76
Hercules Motor Corp.	7
Hersey Mfg. Co.	91
Hydraulic Development Co.	94
Independent Bridge Co.	105
Independent Concrete Pipe Co.	52
Ingersoll-Rand Co. (Cameron Steam Pump Works, A. S.)	54
Insley Manufacturing Co.	31
Inspecting Engineers	110
International Filter Co.	93
Irving Iron Works	75
Jeffrey Mfg. Co.	41
Jenkins Bros.	92
Jennison-Wright Co.	Second Cover
Kalman Steel Co.	6
Kellogg Co., M. W.	102
Kennedy Valve Mfg. Company	90
Kerlow Steel Flooring Co.	76
Keuffel & Esser Co.	108
Kunkely of New York	80
Kinnear Mfg. Co.	76
Koehring Company	20
Koppel Indust. Car & Equip. Co.	70
La Clede Christy Clay Prod. Co.	73
Laclede Steel Co.	78
Lakewood Engineering Co.	11
Lawrence Cement Co.	80
Lawrence Pump & Engine Co.	100
Leadite Co., The	48
Lecourtenay Co.	98
Leopold Co., Inc., F. B.	92
Leschen & Sons Rope Co., A.	88
Lidgerwood Mfg. Co.	87
Link Belt Co.	3rd Cover
Littleford Bros.	103
Lock Joint Pipe Co.	33
Lowell Wrench Co.	75
Ludlow Valve Mfg. Co.	92
Lufkin Rule Co.	107
MacArthur Concrete Pile and Foundation Co.	74
McClintic-Marshall Co.	106
McGraw-Hill Book Co.	105-109
McKiernan-Terry Drill Co.	30
McMyler Interstate Co.	32
McWane Cast Iron Pipe Co.	95
Manistee Iron Works Co.	98
Marion Malleable Iron Works	78
Metalweld Service Corp.	85
Michigan Pipe Co.	96
Michigan Valve & Fdry. Co.	92
Milwaukee Bridge Co.	105
Milwaukee Corrugating Co.	133
Minneapolis Steel & Mchy. Co.	104
Mississippi Wire Glass Co.	76
Monighan Machine Co.	86
Moore Speedcrane Co.	86
Moore Trench Mach. Co.	88
Morris Machine Works	98
Morse & Son, Inc., A. J.	82
Mount Vernon Bridge Co.	105
Mundy Sales Corp., The	86
National Cast Iron Pipe Co.	94
National Hoisting Eng. Co.	88
National Steel Fabric Co.	73
Nat'l Water Main Cleaning Co.	94
Nelson Iron Works, N. P.	72
Newark Concr. Pipe Co.	73
Norbom Engineering Company	85
Northwest Engr. Co.	18-19
Northwestern Expanded Metal Co.	75
Norwood Engineering Co.	93
Ohio Locomotive Crane Co.	87
Orr & Sembower, Inc.	82
Orton Crane & Shovel Co.	17
Osgood Co., The	87
Owen Bucket Co.	88
Oxweld Acetylene Co.	45
Parker, A. A.	98
Parsons Co.	15
Patterson Co., W. W.	104
Peelle Company	75
Pennsylvania Drilling Co.	82
Penstock Constr. Co.	96
Petroleum Iron Works Co.	102
Phoenix Bridge Co.	105
Pittsburgh-Des Moines Steel Co.	104
Porter Company, H. K.	70
Portland Cement Ass'n.	12
Positions Vacant and Wanted.	117
Post & McCord, Inc.	104
Proposals	113
Protexol Corp.	74
Pulsometer Steam Pump Co.	100
R. C. Products Co.	73
Rail Steel Bar Ass'n.	77
Ramapo Ajax Corp.	70
Ransome Concrete Machy. Co.	10
Raymond Concrete Pile Co.	4-5
Rex Watson Corp.	72
Riter-Conley Co.	105
Roberts Filter Mfg. Co.	93
Roebling's Sons Co., J. A.	103
Russell & Company, The	34
Rust Engineering Co.	102
Ryerson & Son, Jos. T.	43
Sanderson-Cyclone Drill Co.	84
Sauerman Bros.	36
Savannah Creosoting Co., Inc.	74
Seabrook Co., C. F.	70
Searchlight Section	122
Shoemaker Bridge Co.	105
Simplex Concrete Pile Ass'n Inc.	80
Simplex Valve & Meter Co.	90
Smith Co., T. L.	80
Smith Mfg. Co., A. P.	96
Snare Corp., Frederick	106
Snead Architectural Iron Works	106
Southern Wood Preserving Co.	74
Special Paper Mfg. Co.	107
Spencer, White & Prentis, Inc.	84
Sprague & Henwood, Inc.	82
Standard Oil Co. of N. Y.	70
Standard Wood Pipe Co.	96
Steele & Condict, Inc.	106
Sterling Engine Co.	98
Stuebner, G. L. Iron Works	88
Sullivan Machinery Co.	86
Summerhays Sons, Wm.	102
Sweets Steel Co.	70
Taylor Instrument Cos.	100
Terry & Tench Co.	107
Thew Shovel Co.	35
Timken Roller Bearing Co.	22
Tippett & Wood	104
Toledo Crane Co., The	86
Tri-Lok Co.	78
Truscon Laboratories	75
Union Iron Works	84
Union Water Meter Co.	90
U. S. Cast Iron Pipe & Fdy. Co.	97
Universal Crane Co.	86
Universal Drafting Machine Co.	107
Universal Form Clamp Co.	74
Universal Port. Cement Co.	50
Virginia Bridge & Iron Co.	106
Vogt Bros. Mfg. Co.	90
Vulcan Iron Works, Chicago	85
Vulcan Iron Works, Pa.	83
Vulcanite Portland Cement Co.	81
Wailes-Dove-Hemiston Corp.	75
Walsh & Weidner Boiler Co.	102
Wan Advertisements	121
Waukesha Motor Co.	131
Weber Chimney Co.	102
Weber Engineering Corp.	82
Western Wheeled Scraper Co.	70
Whitcomb Co., Geo. D.	29
Williams Co., G. H.	88
Wisconsin Bridge & Iron Co.	105
Wood Co., R. D.	96
Woodward Governor Co.	98
Worthington Pump & Mchy. Co.	101
Wyckoff & Son Co., A.	94
Wyckoff Pipe & Creosoting Co.	74

CONSTRUCTION MARKET PLACE—Continued from page 134

Valves, Automatic
Kennedy Valve Mfg. Co.
Ludlow Valve Mfg. Co.

Valves, Compound
Union Water Meter Co.

Valves, Control Electric
Michigan Valve & Fdy. Co.
Simplex Valve & Meter Co.

Valves, Regulating
Ludlow Valve Mfg. Co.

Valves, Sluice
Coffin Valve Co.
Coldwell Wilcox Co.
Michigan Valve & Fdy. Co.

Ventilators
Milwaukee Corrugating Co.

Wagons, Asphalt
Rex Watson Corp.

Wagons, Dump
Austin Western Road Mchry. Co.
Rex Watson Corp.

Wagons, Dump Auto
Austin Western Road Mchry. Co.

Water Main Cleaning
National Water Main Cleaning Co.

Waterproofing Compounds and Material
Anti-Hydro Waterproofing
Carey Co., Philip
Truscon Laboratories
Wailes-Dove-Hermiston Corp.

Water Purification
Arnold Hoffman Co., Inc.
Dorr Company
Electro Bleach. Gas Co.

Water Softeners
Amer. Water Softener Co.
Graver Corp.
International Filter Co.
Roberts Filter Mfg. Co.

Welding & Cutting Apparatus
Blaw-Knox Co.
Oxweld Acetylene Co.

Welding, Flux & Rods
Oxweld Acetylene Co.

Well Drilling Machines
American Well Works

Winches, Ship, Hand, Steam and Electric
Brown Hoisting Mchy. Co.
Dobbie Fdy. & Mchy. Co.
Lidgerwood Mfg. Co.

Window Sash, Putty
Truscon Laboratories

Window Sash Steel
Ryerson & Son, Inc.

Wire Glass
Mississippi Wire Glass Co.

Wire Rope
(See Rope, Wire)

Wire Rope, Fittings
American Steel & Wire Co.
Roebling's Sons Co., J. A.

Wire Rope Slings
American Steel & Wire Co.
Roebling's Sons Co., J. A.

Wood Casings
Michigan Pipe Co., The

Wood Preservatives
Protexol Corpn.
Truscon Laboratories

Wrenches
Lowell Wrench Co.

Index to "Searchlight" Advertisers, Page 122

Link-Belt Bucket Elevators

All Types and Sizes

Built to the high Standard which characterizes all Link-Belt Products

Sprocket and Traction Wheels. Made to fit the chain. Furnished in the >FLINT-RIM< or gray iron. Stocks of popular sizes.

Buckets — Malleable Iron, Pressed Steel or Steel Continuous. For all services. Large Stocks.

For Handling All Kinds of Materials

Tell us the kind of Material you wish to handle and full particulars

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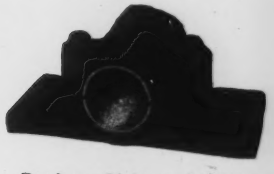

Bearings—Light and heavy with approved types of lubrication, oil well, grease cup, ring oiling, or collar oiling.

>HEX-TOP< Grease Cup of Malleable iron. Rugged—grease tight and easily turned by hand or wrench. Malleable iron safety collars—durable and light in weight.

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2686

LINK-BELT

ALL welds furnished by Grinnell are the work of specially trained welders, each of whom stamps his number on every job. Photo below shows welder at work welding a nozzle on a small header

"ABSOLUTELY 100%" was the word received from the plant where the array of bends shown above was installed. A typical instance of Grinnell Service on pipe fabricating regardless of the size or complexity of the job

Translating Specifications into Usable Finished Products

SATISFACTORY pipe bending, welding and the furnishing of lap joints is largely bound up in the ability of the fabricator to do several things well.

First of all is the proper interpretation of a specification. In this we have the advantage of a long experienced engineering organization.

Second is the workmanship involved, because these fabricated items are more largely a matter of workmanship than any other element in a piping specification.

In bending, for instance, proper filling is vital. Here Grinnell utilizes special machinery to do the work that elsewhere is done by back-breaking human labor with all its attendant uncertainties.

Then take welding. It is a truism in the industry that no weld is better than its welder. Grinnell workmen are properly trained. Each weld bears the stamped number of the welder. Good workmanship is made as certain as possible because poor workmanship is easily identified.

But properly interpreted specifications and splendid fabrication of superior materials are not enough. Service is as essential, too. Ample stocks and facilities at Auburn, R. I., Warren, Ohio, and Atlanta, Ga., assure adequate distribution in every section.

You can place your bending, welding and lap joint work with us in the knowledge that all the essential elements for its accurate, quick and dependable production are here to serve you. For complete information write the Grinnell Company, 276 W. Exchange Street, Providence, R. I.

GRINNELL

Fittings, Hangers, Valves, Pipe Bending Welding, Piping Supplies, Etc.